FOUNDED IN 1856

RAILWAY AGE

THE STANDARD RAILROAD WEEKLY FOR ALMOST A CENTURY

SEPTEMBER 8, 1952

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Operating tests prove TIMKEN® bearings go from one wheel-turning to the next without attention!

OPERATING tests on passenger cars and diesels in regular service prove it! Grease-lubricated Timken® tapered roller bearings on passenger cars and diesels go safely from one wheel-turning to the next without additional lubricant.

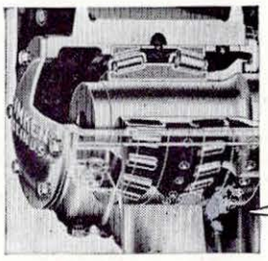
Three leading railroads have already switched from oil to grease in their Timken bearing equipped passenger cars. One ran grease-lubricated Timken bearings over 200,000 miles without adding lubricant. And wheel-turning to wheel-turning tests of grease-lubricated Timken bearings by another dozen railroads are producing favorable results.

The switch from oil to grease for Timken bearings is bringing new operating economies to the railroads two ways: (1) by eliminating the man-hours previously spent to check and add lubricant. (2) by making savings on the lubricant itself.

Timken bearings can be converted from oil to grease lubrication without modifying the bearings . . . and without buying extra journal parts. And they're the *only* railroad journal bearings which can consistently go a full wheel-turning period on AAR-approved grease with no addition of lubricant!

Look into the cost-saving advantages of grease-lubricated Timken bearings yourself. Write The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ont. Cable address: "TIMROSCO".

TIMKEN
TRADE-MARK REG. U. S. PAT. OFF.
TAPERED ROLLER BEARINGS



GREASE ME AT ONE WHEEL-TURNING ...FORGET ME 'TIL THE NEXT!

NOT JUST A BALL ○ NOT JUST A ROLLER ▭ THE TIMKEN TAPERED ROLLER ▭ BEARING TAKES RADIAL ⊙ AND THRUST →⊙← LOADS OR ANY COMBINATION ✳

KEEP MAINTENANCE COSTS DOWN

. . . by using TEXACO Superheat Valve Oil

Even under superheat conditions, *Texaco Superheat Valve Oil* gives sustained protection. Smoke box gases and wet steam have little effect on its tough, persistent lubricating film. Thus, valve and cylinder bushings, rings, piston heads and rods all last longer . . . maintenance costs come down all around.

Texaco Superheat Valve Oil is specially made for this severe service. Leading railroads have used it for years and will tell you what a great job it does in assuring clean operation and reduced wear.

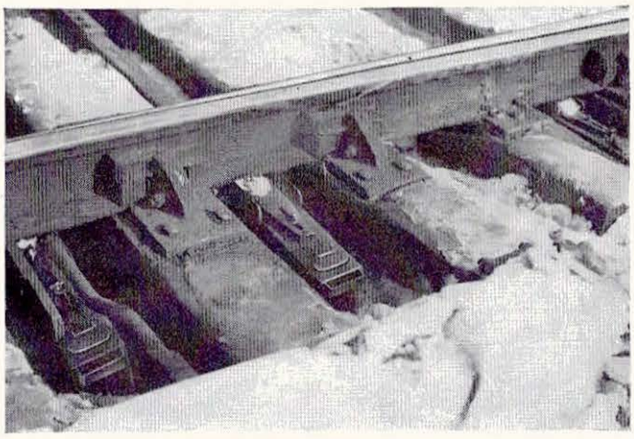
Another cost-reducing lubricant is *Texaco 922 Grease* for valve motion bearings, crossheads, brake rod pins and other parts. You can count on it for long-lasting protection. It carries the heaviest loads, yet is soft enough for gun application.

Use Texaco Railroad Lubricants and Texaco Systematic Engineering Service to keep your rolling stock rolling. Both are available in all 48 States. Just call the nearest Railway Sales office in New York, Chicago, San Francisco, St. Paul, St. Louis or Atlanta; or write The Texas Company, *Railway Sales Department,* 135 East 42nd Street, New York 17, New York.

TEXACO Superheat
VALVE OIL

Faithfully yours
50
for Fifty Years

TUNE IN: On television—the TEXACO STAR THEATER starring MILTON BERLE. See newspaper for time and station.



KEEP SWITCHES ICE-FREE WITH *Winter Kings*

Ice cannot clog slips and switches when Bethlehem Winter Kings are on the job. These simple, sturdy little switch-heaters melt snow as it falls, preventing dangerous ice from getting a toe-hold.

The Winter King slips conveniently between ties. It has a shielded flame that burns steadily, heating the all-important zone around switch-point and rail. The shields prevent scorching of the ties and protect against wind. Even in gusty weather and swirling blizzards, the flame stays alive.

Note the sliding cover on the housing. It is easily adjustable, so that the flame can be regulated in only a few seconds. High, medium, low . . . control the heat as conditions require.

The Winter King burns inexpensive kerosene—a fuel that can safely be added while the heater is in use. One filling lasts for many hours. After the filling has been completed, a self-closing cap springs shut, effectively sealing out dirt, cinders, water, and other foreign matter.

Suggestion: order your Winter Kings now, to allow time for installation before the snow flies.

BETHLEHEM STEEL COMPANY, BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

BETHLEHEM STEEL

ELECTRO-MOTIVE PRESENTS

THE SD7 SIX-MOTOR ROAD SWITCHER—

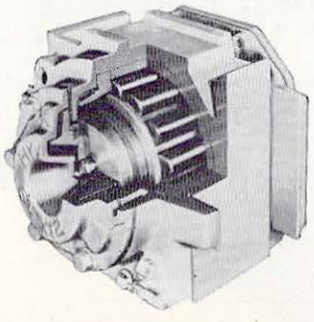
HYATT-EQUIPPED

A six-motor, six-axle, heavy-duty road switcher—the SD7 is the first locomotive of its type to use the new Flexi-Coil truck equipped with Hyatt Roller Bearings.

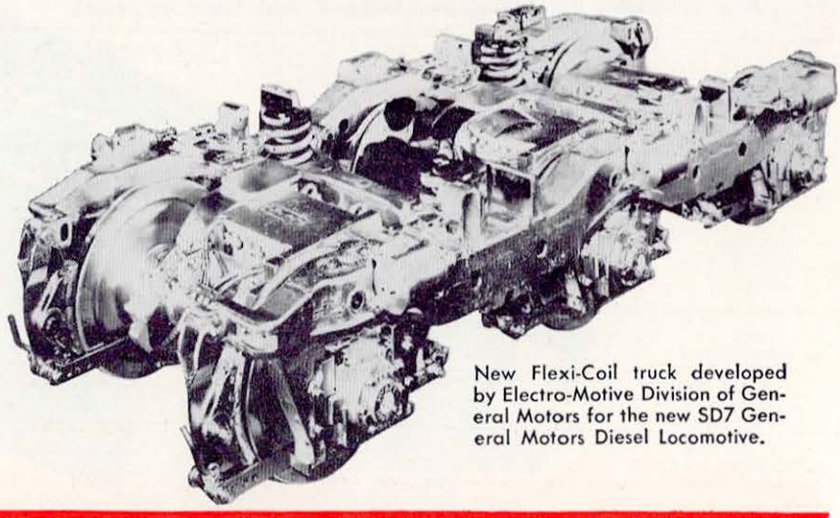
This new Electro-Motive development in switcher truck design embodies an entirely new principle in springing and permits riding quality comparable to the finest passenger locomotive.

High capacity straight radial Hyatt Roller Bearings, with resilient thrust blocks to cushion sidewise shocks make Hyatt Roller Bearing Journal Boxes the ideal choice for this new Flexi-Coil truck.

And too, the six motors in the new SD7 General Motors Diesel Locomotive are equipped with dependable Hyatt Traction Motor Armature Bearings. Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.



Hyatt Roller Bearing Journal Box with resilient thrust unit as used on the GM Diesel Locomotives.



New Flexi-Coil truck developed by Electro-Motive Division of General Motors for the new SD7 General Motors Diesel Locomotive.

HYATT ROLLER BEARING JOURNAL BOXES

Vol. 133, No. 10 September 8, 1952

RAILWAY AGE

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Railway Signaling & Communications Car Builders' Cyclopedia Locomotive Cyclopedia
Railway Engineering & Maintenance Cyclopedia American Builder
Marine Engineering & Shipping Review Marine Catalog & Directory
Books covering transportation and building

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Saving

$ OPERATING...
MAINTENANCE...
MATERIAL EXPENSE

Here are facts from one record*

1. On a total of 34 miles of double railroad track . . . 22.4 miles were converted to single track.
2. Advantage of efficient direction of train movements from one point was obtained.
3. Maintenance of Roadway greatly reduced.
4. Salvaged rails, ties, and ballast were used at other places.

** Additional factual data will be supplied on request*

"UNION" Centralized Traffic Control can reduce terminal-to-terminal time with safety and pay its way through reductions in operating expenses. May we help you?

UNION SWITCH & SIGNAL

DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY

SWISSVALE PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

WEEK AT A GLANCE

CURRENT RAILWAY STATISTICS

Operating revenues, six months	
1952	$5,119,129,904
1951	5,035,567,042
Operating expenses, six months	
1952	$3,999,615,658
1951	3,964,143,107
Taxes, six months	
1952	$ 592,191,515
1951	572,438,812
Net railway operating income, six months	
1952	$ 441,832,593
1951	397,487,647
Net income, estimated, six months	
1952	$ 290,000,000
1951	260,000,000
Average price railroad stocks	
September 2, 1952	64.66
September 4, 1951	53.64
Car loadings, revenue freight	
34 weeks, 1952	23,927,043
34 weeks, 1951	26,202,372
Average daily freight car surplus	
Week ended August 23, 1952	6,780
Week ended August 25, 1951	4,354
Average daily freight car shortage	
Week ended August 23, 1952	7,772
Week ended August 25, 1951	17,852
Freight cars delivered	
July 1952	5,402
July 1951	5,290
Freight cars on order	
August 1, 1952	95,265
August 1, 1951	144,810
Freight cars held for repairs	
August 1, 1952	111,680
August 1, 1951	101,001
Average number railroad employees	
Mid-July 1952	1,182,485
Mid-July 1951	1,295,890

In This Issue . . .

TEAMWORK IN RAIL-LAYING means, on the Milwaukee, cooperation between the maintenance-of-way and operating departments to the advantage of both—and to the railroad in terms of man-hour savings. Work of rail-laying gangs in double-track territory proceeds without interruption because the segment of track on which they are working is taken out of service during the day. The occasional inconvenience that the operating department may suffer from having to run trains in both directions on the second track all day is offset, however, because night operation of trains at normal speeds is possible on both tracks, as a result of the means used to put the new track in shape for use as work proceeds. The article on page 43 explains how this is done.

TAX RELIEF for a railroad is legitimate if the railroad is owned by a group of people who constitute a state or similar governmental entity, but illegal and unconscionable if the railroad is owned by a group of people who constitute a corporation chartered by the state—such, at any rate, is the argument advanced by New York's Long Island Transit Authority in offering a "plan" to secure ownership of that bankrupt property. The state, with the aid of local and federal government agencies, first deliberately created a set of conditions which made it impossible for the Long Island to pay its property taxes, and it now seeks to take over the railroad on terms which would make it impossible for it ever to pay property taxes again. Such procedure, our leading editorial suggests (page 41), puts the state's executive and leadership in the class of the man who beats his child with a club while professing opposition to corporal punishment.

CHECK THE CONTENTS PAGE! For the reader's convenience, Railway Age news is departmentalized. Some departments—like equipment orders and supply trade news—appear every week; others (monthly revenue and expense figures, meetings and conventions dates and locations) at longer, but regular, intervals; still others, such as current publications, overseas happenings, run irregularly. All are listed on the contents page in the issue in which they appear.

REVENUE FROM AIR RIGHTS over railroad facilities is likely to be an increasingly important item in carriers' budgets as a result of modernization, especially dieselization. Such, at any rate, is the logical conclusion to be drawn from the experience in recent years of several roads, particularly in the "downtown" sections of large metropolitan centers. This trend makes it a matter of increasing importance for railroads to explore procedures and establish policies for arriving at equitable terms for the lease or sale of air rights. E. E. Phipps of the Baltimore & Ohio recently reviewed this situation, with emphasis on the legal and tax angles; his conclusions are outlined in the article on page 46.

WEEK AT A GLANCE

CLEANING OUT TANK CARS isn't such a dirty job at the Santa Fe's Hobart car repair yard at Los Angeles, because petroleum products, varnish, soap, molasses or other contaminating residues are successfully removed by a routine of presteaming, scrubbing by high-velocity streams of alkaline detergent solutions, and thorough rinsing. A corollary difficulty —that of disposing of wastes from such washing operations without polluting the neighborhood—has been met by setting up an effective waste-water cleaning plant. The apparatus employed, and the techniques of its use, are outlined herein—page 48.

In Washington . . .

UNION SHOP FOR THE "NON-OPS" has been accepted by the Eastern railroads, effective September 15, subject to specific agreements on individual roads. The Southeastern roads have not set up a committee to negotiate with the brothers about the union-shop plan, and conferences between the unions and the Western roads had not been resumed when this issue went to press. Regional conferences on federal wage control policies as they affect the railroads are being held this month by the Railroad and Air Line Wage Board.

. . . And Elsewhere

ARE YOU A KENTUCKY COLONEL? The railroad industry undoubtedly has its share of holders of these prized commissions. The latest addition to the roster that we've heard of is Bruce Wyle, former manager of the Reading's Port Reading terminal, who is now running the railroad at the new atomic energy plant under construction by F. H. McGraw & Co. at Paducah.

"YOKEL AND SOPHISTICATE" — this is how the Rensselaer (Ind.) Republican has characterized the president of the Monon, John Barriger, as a result of a call on that community by a party of Monon officers on their recent "Town Meeting of the Rails" visits to all major Monon towns. The Republican reporter said that, at a county fair, the enthusiastic Monon chief would be "as much at home as any of us local yokels"—in short, "shake him up and you'd come up with a mixture of the yokel and the sophisticate."

JAMES M. SOUBY, retiring at the age of 70 as general solicitor of the Association of American Railroads, joined the association's legal staff in 1937 after having been with the Union Pacific for 18 years.

ANOTHER MAJOR YARD PROJECT—this one involving enlargement and modernization of the Pennsylvania's Conway yard at Pittsburgh—appears to be in the offing. Detailed specifications are yet to be announced, but reports indicate that the cost will run well up into eight figures.

ASSUMPTION BY REGULATORY AUTHORITIES of another prerogative heretofore considered as belonging to railroad management seems indicated in a recent decision of the California Public Utilities Commission. In denying the Southern Pacific permission to discontinue certain San Francisco-Sacramento local passenger trains, the commission "found" also "that public convenience and necessity requires that the passenger service now performed [by those trains] . . . be improved by substituting self-propelled railway passenger cars." In the same decision the commission also ordered "improvement of the equipment and facilities now used" on other trains, but did not specify what equipment should be provided.

STANDARD ENGINEER'S REPORT

DATA

LUBRICANT Calol Rail + Flange Lubricant

LUBRICATOR Mechanical

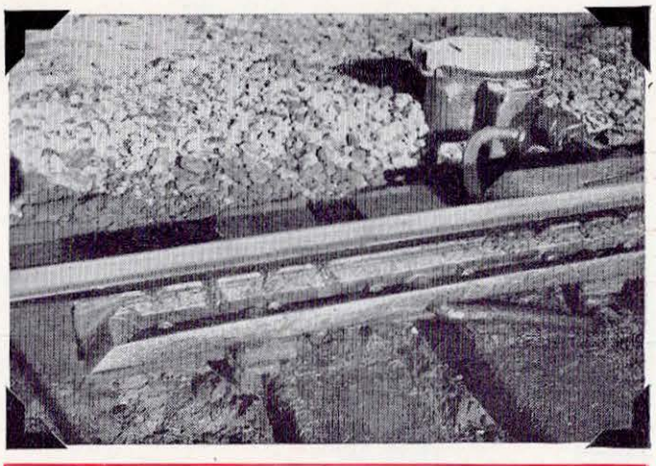
LOCATION California + Oregon

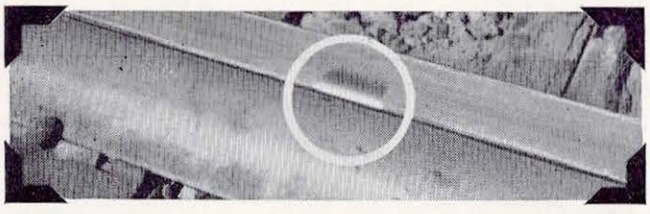
CONDITIONS Ambient temp. -20° F. to 110° F. Continuous use

TEST PERIOD 10 months

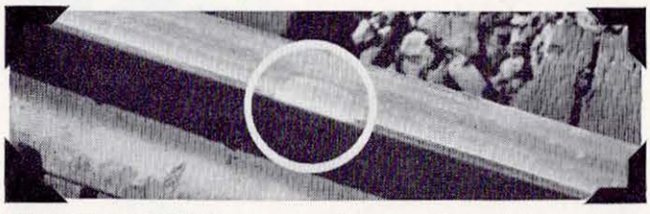
New rail-flange lubricant meets toughest conditions!

CALOL RAIL AND FLANGE LUBRICANT, tested continuously for 10 months at six locations on a major western railroad, proved entirely satisfactory. Although air temperatures ranged from 20 below zero to 110 above, the lubricant retained correct consistency for good pumpability both in storage and lubricators. Grease buttons on wiping bars remained in position even in direct sunlight. Coverage was excellent, as demonstrated by photographs below of rails at successive curves serviced by the lubricator shown at right.

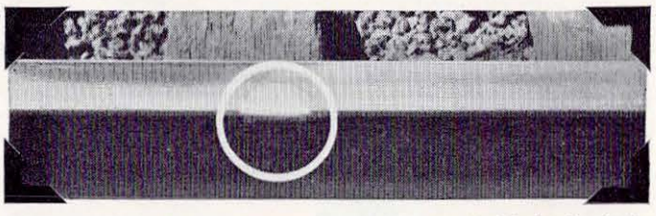




FILM OF CALOL RAIL & FLANGE LUBRICANT at first curve. Circled area is wiped clean for contrast.



FILM OF LUBRICANT on second curve from lubricator.



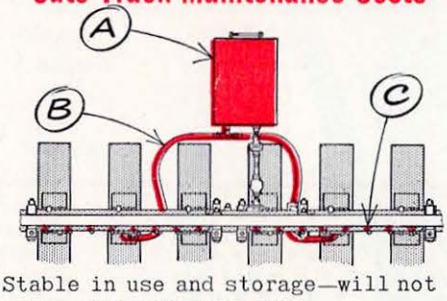
THIRD CURVE. Note grease is still well distributed.

FREE CATALOG: "How to Save Money on Equipment Operation," a new booklet full of valuable information, will be sent you on request to Standard Oil Company of California, 225 Bush St., San Francisco, Calif.

CALOL

TRADEMARK "CALOL" REG. U.S. PAT. OFF.

How Calol Rail and Flange Lubricant Cuts Track Maintenance Costs



A. Stable in use and storage—will not separate, "bleed" or harden.

B. Pumps freely from lubricators from below zero temperatures to over 100 degrees. Retains even consistency.

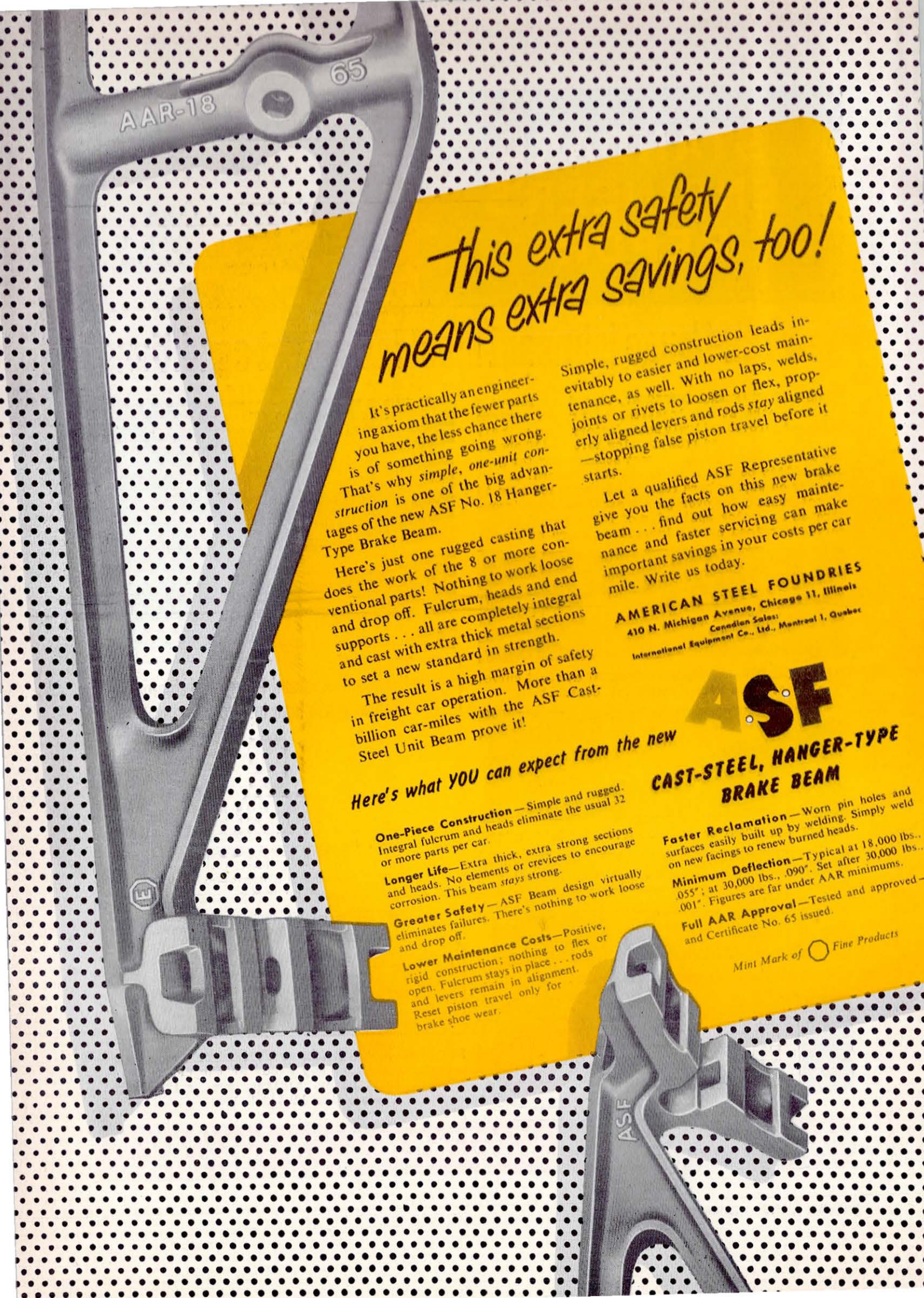
C. Forms stable buttons which resist high temperatures. Very adhesive—carries for long distance on rails. Resists tendency to pull over tops of rails.

FOR MORE INFORMATION about this or other petroleum products of any kind, or the name of your nearest distributor handling them, write or call any of the companies listed below.

STANDARD OIL COMPANY OF CALIFORNIA
225 Bush Street • San Francisco 20, California

THE CALIFORNIA COMPANY
P. O. Box 780 • Denver 1, Colorado

STANDARD OIL COMPANY OF TEXAS
P. O. Box 862 • El Paso Texas



This extra safety means extra savings, too!

It's practically an engineering axiom that the fewer parts you have, the less chance there is of something going wrong. That's why *simple, one-unit construction* is one of the big advantages of the new ASF No. 18 Hanger-Type Brake Beam.

Here's just one rugged casting that does the work of the 8 or more conventional parts! Nothing to work loose and drop off. Fulcrum, heads and end supports . . . all are completely integral and cast with extra thick metal sections to set a new standard in strength.

The result is a high margin of safety in freight car operation. More than a billion car-miles with the ASF Cast-Steel Unit Beam prove it!

Simple, rugged construction leads inevitably to easier and lower-cost maintenance, as well. With no laps, welds, joints or rivets to loosen or flex, properly aligned levers and rods *stay* aligned —stopping false piston travel before it starts.

Let a qualified ASF Representative give you the facts on this new brake beam . . . find out how easy maintenance and faster servicing can make important savings in your costs per car mile. Write us today.

AMERICAN STEEL FOUNDRIES
410 N. Michigan Avenue, Chicago 11, Illinois
Canadian Sales:
International Equipment Co., Ltd., Montreal 1, Quebec

ASF

Here's what YOU can expect from the new ASF CAST-STEEL, HANGER-TYPE BRAKE BEAM

One-Piece Construction—Simple and rugged. Integral fulcrum and heads eliminate the usual 32 or more parts per car.

Longer Life—Extra thick, extra strong sections and heads. No elements or crevices to encourage corrosion. This beam *stays* strong.

Greater Safety—ASF Beam design virtually eliminates failures. There's nothing to work loose and drop off.

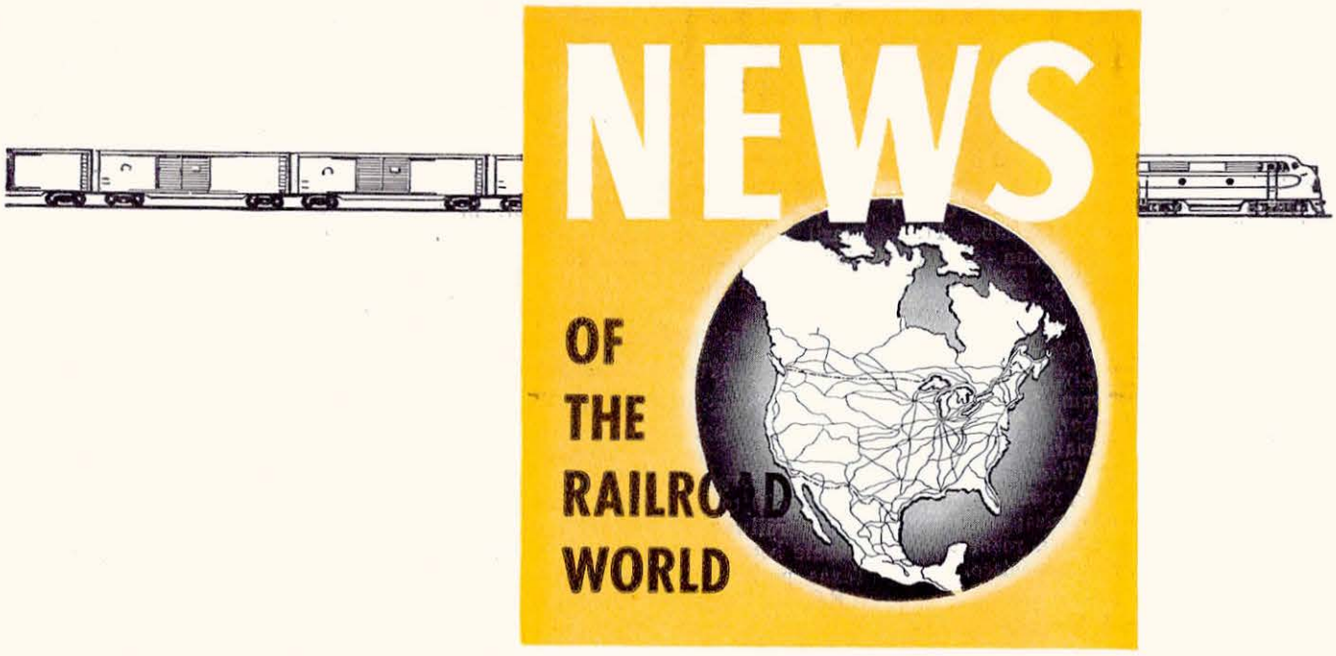
Lower Maintenance Costs—Positive, rigid construction; nothing to flex or open. Fulcrum stays in place . . . rods and levers remain in alignment. Reset piston travel only for brake shoe wear.

Faster Reclamation—Worn pin holes and surfaces easily built up by welding. Simply weld on new facings to renew burned heads.

Minimum Deflection—Typical at 18,000 lbs., .055"; at 30,000 lbs., .090". Set after 30,000 lbs., .001". Figures are far under AAR minimums.

Full AAR Approval—Tested and approved—and Certificate No. 65 issued.

Mint Mark of ◯ *Fine Products*



Eastern Railroads and "Non-Op" Unions Sign Union Shop Agreement

The carriers' conference committee representing eastern railroads in the union-shop case has signed a union-shop agreement with 17 unions representing non-operating employees. The agreement was signed in Washington, D.C., on August 29, and it becomes effective September 15.

It follows generally the recommendations of the emergency board which reported favorably on the "non-op" demands last February. (*Railway Age*, February 25, page 57.) It has dues-check-off arrangements as well as the union-shop provisions, but the former will not become effective until supplemental agreements are made on individual roads. That plan was set out in the agreement as follows:

"The [check-off] provisions . . . shall not become effective unless and until the carrier and the organization shall, as a result of further negotiations, . . . agree upon the terms and conditions under which such provisions shall be applied . . ."

Meanwhile, the negotiations between the "non-ops" and the conference committee representing western roads have been recessed. The southeastern roads have not created a conference committee to deal with the matter on a joint basis.

The eastern conference committee which signed the agreement was headed by J. W. Oram, the other members having been F. S. Hales, H. E. Jones, E. B. Perry, and G. C. White. The "non-op" committee was headed by G. E. Leighty, who signed the agreement in that capacity, and also on behalf of the Order of Railroad Telegraphers of which he is president.

Other union parties include the Railway Employees Department, A.F.L., and organizations operating through that department; Brotherhood of Railway Clerks; Brotherhood of Maintenance of Way Employees; Brotherhood of Railroad Signalmen; National Organization Masters, Mates and Pilots; National Marine Engineers' Beneficial Association; International Longshoremen's Association; Hotel & Restaurant Employees and Bartenders International Union.

The union-shop provisions stipulate that covered employees must join the union representing their craft or class "within sixty calendar days of the date they first perform compensated service . . . after the effective date of this agreement." Thereafter, they "shall maintain membership in such organization."

Meanwhile, there is a stipulaton to the effect that nothing in the agreement shall "alter, enlarge or otherwise change the coverage of the present or future rules and working conditions agreements." The exemption of employees not now embraced within the scope of working agreements is more specifically effected by this provision:

"This agreement shall not apply to employees while occupying positions which are excepted from the bulletining and displacement rules of the individual agreements, but this provision shall not include employees who are subordinate to and report to other employees who are covered by this agreement. However, such excepted employees are free to be members of the organization at their option."

Another provision protects employees who are not accepted as full-fledged members of the unions involved. Nothing in the agreement, it says, "shall require an employee to become or to remain a member . . . if such membership is not available to such employee upon the same terms and conditions as are generally applicable to any other member." This same provision goes on to protect also those employees to whom union membership may be denied for any reason other than failure to pay regular dues, initiation fees and assessments—"not including fines and penalties."

Provisions setting out procedures for dismissal of employees who refuse to join the unions give the carriers 60 days in which to find replacements. And they also provide that an employee so dismissed "shall have no time or money claims by reason thereof."

RR Wage Board to Hold Regional Conferences

The Railroad and Airline Wage Board, which determines policies and issues regulations to stabilize compensation of employees subject to provisions of the Railway Labor Act, has scheduled a series of 11 regional conferences to be held in September in

six major cities. The conferences, all of which open at 10 a.m. in the various cities, are designed to familiarize representatives of transportation agencies and labor organizations under its jurisdiction with stabilization policies in regulations issued or adopted by the board.

Dates and places of conferences covering railroads follow: September 11, Regional Wage Stabilization Board Room, Builders' building, 228 North LaSalle street, Chicago; September 18, Regional Wage Stabilization Board Room, 346 Broadway (9th floor), New York; September 23, Civil Aeronautics Administration, 50 Seventh street, N.E., Atlanta, Ga.; September 25, Auditorium, Mercantile National Bank, Main street at Ervay, Dallas, Texas; September 29, Federal building, room 810, 312 N. Spring street, Los Angeles; and September 30, Flood building, room 944, 870 Market street, San Francisco.

Brazil Railroad Group To Study 3 Months on B&O

The Baltimore & Ohio will be host for three months to a five-man team of Brazilian railroad officers who are in this country to study railroad management methods. Purpose of the team's visit is to help in the "revitalization program" of Brazil's railroads.

Other groups are expected to come to this country as the improvement program continues. These trips are under the Point IV program, and are sponsored jointly by the Brazilian railroads and the U.S. government. Arrangements are made by the Office of International Trade, Department of Commerce.

The Export-Import Bank already has made loans to two of Brazil's rail lines for the purchase of new equipment and modernization work. Members of the National Department of Transport in Brazil also are expected to visit this country in connection with the "revitalization program."

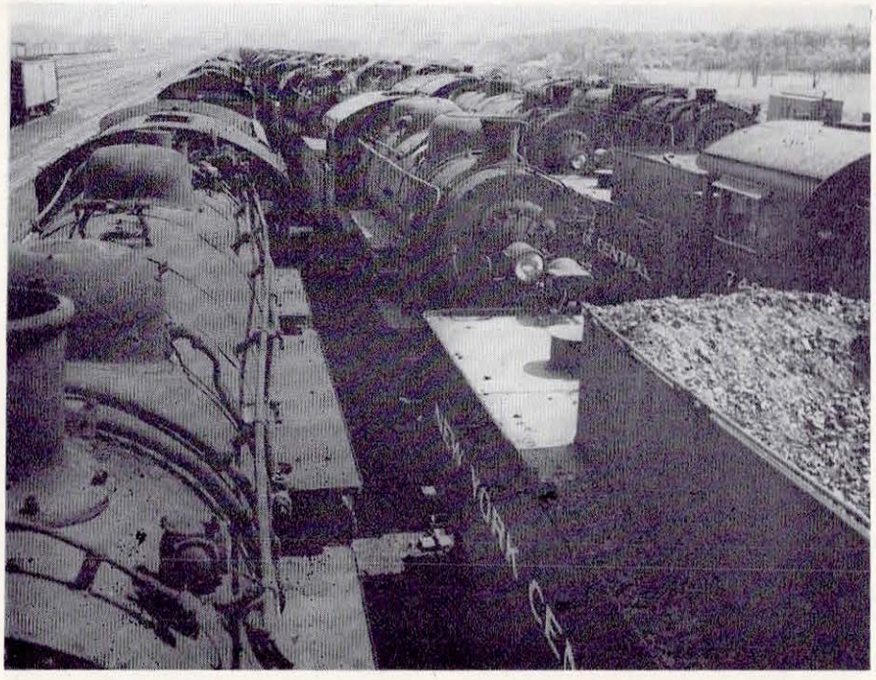
R.F.C. Financing Sought for New Coastwise Car Ferries

The Delaware-Alaska Steamship Company of Houston, Tex., a new company, has applied to the Reconstruction Finance Corporation for a loan of $42,000,000 to finance the construction of six "railway car transfer vessels" to operate between Wilmington, Del., and Texas ports. This was announced by R.F.C. on September 2 in pursuance of its policy of making public applications for "large" loans.

New Wage Board Named in Canada

It is hoped that final settlement of the wage and rules dispute between the Canadian railways and the non-operating unions will result from the deliberations of a conciliation board just set up under the chairmanship of Justice R. L. Kellock of the Supreme Court of Canada. Other members of the board are David Lewis, a Toronto lawyer, selected by the unions, and Paul S. Smith, Montreal lawyer, selected by the railways.

Following a deadlock between the parties over union demands for a union shop and the injection of "escalator clauses" into wage agreements, the help of the Canadian government was sought to reach a solution. As reported in *Railway Age*, July 21, page 12, the federal labor minister, Milton Gregg, in July named Arthur MacNamara, deputy labor minister, as conciliation officer to seek a solution. His efforts have not been fruitful, so the three-man board has been set up to deal with the case.



SOME OF THE 300 New York Central steam locomotives which will be scrapped during the next few months. The locomotives—the scrap metal from which will produce 50,000 tons of finished steel—are stored at various points along the Central. They will be moved to the Lackawanna, N. Y., plant of the Bethlehem Steel Corporation, where they will be stripped down at the rate of about three a day.

Freight Car Loadings

Because of the September 1 Labor Day holiday, carloadings for the week ended August 30 were not available as this issue went to press.

Loadings of revenue freight for the week ended August 23 totaled 834,120 cars; the summary for that week, compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, August 23

	1952	1951	1950
District			
Eastern	140,694	140,869	141,144
Allegheny	165,998	172,071	172,955
Pocahontas	63,239	66,151	63,948
Southern	128,224	127,233	129,697
Northwestern	149,845	143,291	136,338
Central Western	124,136	124,706	131,296
Southwestern	61,984	'64,266	63,287
Total Western Districts	335,965	332,263	330,921
Total All Roads	834,120	838,587	838,665
Commodities:			
Grain and grain products	48,647	53,862	51,556
Livestock	9,676	9,609	8,260
Coal	164,014	155,359	154,103
Coke	13,607	16,614	13,733
Forest products	49,523	46,079	50,203
Ore	'93,187	90,126	79,226
Merchandise l.c.l.	73,849	75,041	89,070
Miscellaneous	381,617	391,897	392,514
August 23	834,120	838,587	838,665
August 16	805,704	829,398	851,240
August 9	782,171	809,365	847,708
August 2	732,920	813,388	837,430
July 26	607,271	820,476	845,011
Cumulative total 34 weeks	23,927,043	26,202,372	24,278,196

In Canada.—Carloadings for the seven-day period ended August 21 totaled 84,462 cars, compared with 82,908* cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
August 21, 1952	84,462	34,829
Cumulative Totals		
August 21, 1952	2,619,784	1,122,760

*Revised

1952's 1st-Quarter Loading Estimate Was 2.5% High

The 13 Regional Shippers Advisory Boards overestimated car loadings for the first quarter of 1952 by 2.5 per cent, according to the latest comparison of forecasts with actual loadings. Chairman A. H. Gass of the Car Service Division, Association of American Railroads, issued the comparison.

It showed overestimates by 10 boards and underestimates by three. By com-

COMPARISON: ESTIMATED NATIONAL FORECAST, REGIONAL SHIPPERS ADVISORY BOARDS, WITH ACTUAL CARLOADINGS, FIRST QUARTER 1952

BOARD	Carloadings, First Quarter 1952 Estimated	Actual	Percentage of Accuracy Over Est'd.	Under Est'd.
Central Western	288,818	274,095	5.1	
Pacific Coast	352,745	324,847	7.9	
Pacific Northwest	219,601	221,877		1.0
Great Lakes	468,104	452,906	3.2	
Ohio Valley	1,008,101	1,000,827	0.7	
Midwest	829,102	815,150	1.7	
Northwest	260,782	258,375	0.9	
Trans-Missouri-Kansas	360,689	341,008	5.5	
Southeast	1,040,508	1,041,344		0.08
Southwest	516,592	531,582		2.9
New England	140,691	140,516	0.1	
Atlantic States	854,532	756,251	11.5	
Allegheny	987,686	984,405	0.3	
Totals	7,327,951	7,143,183	2.5%	

modity groups there were 21 overestimates and 11 underestimates. The range was from an overestimate of 12.1 per cent for brick and clay products, to an underestimate of 14.4 per cent for frozen foods, fruits and vegetables.

In addition to that on brick and clay products, the shipper boards overestimated loadings on poultry and dairy products by 11.6 per cent; paper, paper board and prepared roofing by 9.1 per cent, and citrus fruits by 8.5 per cent. Smallest overestimate was 0.3 per cent for fertilizers (all kinds).

The range of underestimates by commodities was from 0.4 per cent for lumber and forest products to the 14.4 per cent for frozen foods, fruits and vegetables. There was a 10.3 per cent underestimate on potato loadings, and an 8.5 per cent underestimate for sugar, syrup and molasses.

C&O Opens Commissary At Ashland, Ky.

Dining car commissary operations have been transferred by the Chesapeake & Ohio from Cincinnati to Ashland, Ky. The new commissary, costing an estimated $50,000, has been built in the lower level of the Ashland passenger station. The task involved insulating and fireproofing the station walls, and installation of three new iceboxes and a large freezer unit.

Transfer of operations from Cincinnati was carried out without effect on dining car operations. The new commissary is centrally located with respect to passenger train service to Cincinnati, Columbus and Louisville, as well as main line points to the East. It is close to main trackage and cars can be stocked directly from the building.

What's a Button-Dump Truck?

We don't know either—but that's what the printer made us say last week (page 88, September 1 issue) in a picture caption undertaking to describe the use of bottom-dump trucks in an earthmoving operation on the new line of the Union Pacific west of Cheyenne.

D.T.A. Port Study Aim Is Improved Truck Service

The Defense Transport Administration has undertaken an "intensive study" of port facilities to obtain more efficient operation of motor trucks in and out of port areas.

A pilot study is under way in the port of Philadelphia, D.T.A. announced last week. The agency's Street and Highway Transport and Port Utilization Divisions are making the study.

"D.T.A. hopes the survey will enable all parties concerned with loading and unloading at ports to establish and abide by a set of voluntary 'ground rules' thereby eliminating excessive waiting time, lack of coordination in handling shipments, and other problems," D.T.A. Administrator James K. Knudson said.

They Hurt You...

more than they hurt us!

The big trucks crowding the highways are real competition for the Illinois Central and other railroads. They have taken over a sizeable part of the freight-hauling business.

But this doesn't hurt us half as much as it hurts you. Because it's your roads that the big trucks are battering to pieces. Your tax money built these roads, and your tax money repairs the damage the trucks do.

Don't let anyone tell you that your private automobile, your farm truck or other ordinary-sized vehicles are wearing out the roads.

Recent tests by the Highway Research Board prove that the big trucks inflict the damage. A 22,400-pound axle load breaks up roads 6.4 times as fast as an 18,000-pound load. A 44,800-pound axle load causes 12.5 times as much damage as a 32,000-pound load. That should be proof enough.

Now a powerful lobby demands hundreds of millions of dollars for highway improvements. There's no question of the need. But the big trucks haven't yet suggested that they will pay their fair share of the cost—a share based on the speed with which *they* wear out your roads.

They would rather have you go on paying the major share of the cost. That way they can do business and make a profit at your expense.

We believe that the heavy trucking industry should pay its full share of highway building and maintenance. (We pay for our steel highways and pay taxes on them besides.) Then the business of hauling America's freight will go to those doing the best and most economical job. That will save money for everybody.

WAYNE A. JOHNSTON
President

ILLINOIS CENTRAL

Main Line of Mid-America

Reproduction of an advertisement appearing during August, 1952, in newspapers published along the lines of the Illinois Central Railroad.

TRUCK COMPETITION "doesn't hurt us half as much as it hurts you. Because it's your roads that the big trucks are battering to pieces. Your tax money built these roads, and your tax money repairs the damage the trucks do."—A current advertisement circulated to on-line newspapers by the Illinois Central.

F.R.P. Says Travelers Like Railroad Service

A recently completed survey among railroad travelers has led the Federation for Railway Progress to conclude that, as a rule, travelers "like the service they are getting from American railroads." The F.R.P. based its finding on 5,000 "Railroad Service Reports" returned to its Passenger Relations department by railroad travelers.

Compliments for the railroads and their personnel currently outnumber complaints by a substantial margin, the F.R.P. said. The organization has been so impressed by returns that it plans to triple the distribution of "Railroad Service Reports" this year.

These "report cards" are self-addressed and postage prepaid. They provide space for a railroad's name, train and date of trip, comment on employee cooperation, comments on service efficiency, and the name and address of the traveler. When reports are received they are processed by the F.R.P., then forwarded along to the president of the railroad involved.

The F.R.P. first began sampling traveler reaction in 1948. In that year, 45 per cent of the reports received were complaints, 42 per cent compliments, and 13 per cent were in the "constructive suggestion category." According to the organization, this situation is much

YARD TV DEMONSTRATION IN CHICAGO SEPTEMBER 16

A general demonstration of commercial television as a tool in railroad yard operation will be held on September 16 at the Baltimore & Ohio's Barr Yard at Blue Island, Ill., (near Chicago). The demonstration will be conducted by the B&O and RCA-Victor as a follow-up of the "exploratory" tests described by *Railway Age* on August 18, page 52. The equipment will be in service from 10 a.m., until 4:30 p.m.

For the convenience of interested railroad operating and communications officers, a special train will be operated direct to the yard from Grand Central leaving at 2:30 p.m. and returning at 4:15 p.m. (All times quoted being Central Daylight Time). Scheduling of the demonstration will coincide with a "free" afternoon in the programs of the Coordinated Mechanical Associations and the Electrical Section, Association of American Railroads Mechanical and Engineering Division's three-day meeting in Chicago.

FIRSTHAND KNOWLEDGE of tourist facilities and attractions enables Canadian national passenger agents to do a more realistic sales job. During the summer season, some 75 CNR passenger men from the United States visited central and eastern Canadian vacation spots. The group above posed for the photographer on Citadel hill at Halifax, N. S.

improved. In 1951, the reports were 55 per cent complimentary. For the first six months of 1952, complaints were down to 34 per cent.

Railroad Fined

The Interstate Commerce Commission has been advised by the Department of Justice that on August 15, in the U.S. District Court for the Eastern District of Pennsylvania, a judgment in the amount of $3,000 and costs was entered against the railroad in the case of *U.S. v. Reading Company*.

This was announced by I.C.C. Secretary W. P. Bartel in a notice which said the penalty was "for failure to comply with the provisions of Revised Service Order No. 866, prescribing railroad operating regulations for freight car movement in the existing emergency."

Divide Illinois Railroads For Civil Defense Planning

Railroads of Illinois have been divided into two basic regions for civil defense purposes. State Civil Defense Director Lenox R. Lohr has made public announcement of the plans, which call for division into a "Northern region" and a "Southern region" along a line formed by trackage of the Wabash from Danville to East Hannibal. The Wabash line, and communities adjacent thereto, will be included in the "Southern region," Mr. Lohr said.

Each region will be subdivided, with on section in the "Northern region" limited to the city of Chicago and those environs located within an arc described by the Elgin, Joliet & Eastern.
(*Continued on page* 63)

ORGANIZATIONS

Tie Producers to Meet At New Orleans Oct. 22-24

The 34th annual convention of the Railway Tie Association will be held in New Orleans, on October 22-24. W. J. Chambliss, Jr., president, will preside over the sessions, which will be held in the Jung Hotel. The program follows:

OCTOBER 22

Address of Welcome—E. D. Pennybaker, manager, Texas Pacific-Missouri Pacific Terminal.
Response—T. H. Wagner, vice-president, Gross & Janes Co.
Annual report of president.
Address—"Class I Tie Requirements in '53"—Merwin H. Dick, engineering editor, *Railway Age*.
Report of Committee on Mechanical Handling of Cross Ties—M. L. Wilson, Kirby Lumber Corporation, chairman.
Addresses—"What's the Outlook for '53?"—(for the railroads) James H. Aydelott, vice-president, Operations and Maintenance Department, Association of American Railroads; (for the tie producers) D. B. Frampton, president, D. B. Frampton & Co.
Report of Committee on Concentration Yards Operations—Geo. B. Campbell, Jr., Tiller Tie & Lumber Co., chairman.
Address—"What is Being Done to Combat Oak Wilt"—Dr. Lee M. Hutchins, head pathologist, Agricultural Research Administration, U. S. Department of Agriculture.
Address—"Cross and Switch Tie Requirements for Department of Defense"—speaker from the St. Louis District Corps of Engineers, U. S. Army.
Report of Timber Conservation Committee—D. B. Mabry, T. J. Moss Tie Company, chairman.
President's reception.

OCTOBER 23

Report of Manufacturing Practices Committee—Woodrow Epperson, Gross & Janes Co., chairman.
Address—"Short Lines Also Use Ties"—J. M. Hood, president, American Short Line Association.
Report of Committee for Better Understanding of Problems Between Tie Producers and Users—Paul D. Brentlinger, Pennsylvania, chairman.
Address—"Two Years Experience on the Santa Fe in Using Tie Inspectors to Determine the Cause of Failure of Ties at the Time They are Removed"—T. A. Blair, chief engineer, Santa Fe.
Report of National Affairs Committee—John F. Renfro, Taylor-Colquitt Company, chairman.
Address—"History of Cross Ties on the B&O"—C. B. Harveson, chief engineer of maintenance, Baltimore & Ohio.
Report of Specifications Committee—E. J. McGehee, vice-president, Koppers Co., chairman.
Annual Luncheon—Address by I. B. Tigrett, president, Gulf, Mobile & Ohio.
Address—"Tie Production on the West Coast"—Mason E. Kline, Mason E. Kline & Co.
Annual Dinner.

OCTOBER 24

Report of Committee on Checking and Splitting of Cross Ties—J. A. Vaughan, Southern Wood Preserving Company, chairman.
Address—"Too Many Gadgets on Ties?"—A. L. Kuehn, president, American Creosoting Company.
Address—"Comparison of Values Obtained from Utilization of Low Grade Oak Trees for Pulpwood, Lumber and Cross Ties"—W. W. Ward, Pennsylvania State Forestry School.
Address—"Traffic Department's Place in the Tie Industry"—R. C. Juengel, Gross & Janes Co.

Materials Handling Show Scheduled October 14-16

"Making Profits Through Packaging and Materials Handling" will be the over-all theme of the annual exposition, technical short course and competition of the Society of Industrial Packaging and Materials Handling Engineers to be held in Chicago on October 14-16.

The technical short course, which opens one day earlier than the other events (October 13), will be sponsored jointly with the University of Illinois' College of Mechanical Engineering. The competition will be open to packaging designs for domestic and export shipping as well as materials handling equipment.

Railroad Enthusiasts, New York division, will sponsor a rail trip on September 20, via the New York, New Haven & Hartford, to see and ride the Edaville Railroad, South Carver, Mass.

The **Fire Protection and Insurance Section** of the **Association of American Railroads** will hold its three-day annual meeting in New Orleans, beginning October 20. Details of the program have not yet been announced, but, as in the past, there will be several "round table" discussions. All sessions will be held in the Roosevelt hotel.

Louisville, Ky., will be the site of the 103rd regular meeting of the **Ohio Valley Transportation Advisory Board** on September 16-17. At the luncheon session sponsored jointly by the **Transportation Club of Louisville** and the **Louisville Chamber of Commerce,** J. T. Metcalf, general attorney, Louisville & Nashville, will be guest speaker. All sessions will be held in the Brown hotel.

Warren T. White, assistant vice-president of the Seaboard Air Line in charge of the company's industrial development, will be the principal speaker at the annual banquet of the **Columbus (Ga.) Traffic Club,** which will be held on September 11 in the Ralston Hotel, Columbus, Ga.

The **Columbus Transportation Club** will hold its September educational luncheon on September 18, at Riverview Recreation, Inc., 595 West

Goodale street, Columbus, Ohio. John W. Bricker, United States Senator from Ohio, will be guest speaker. Senator Bricker, who is ranking member of the Interstate and Foreign Commerce Committee of the United States Senate, will speak about his duties in that capacity.

A special luncheon, sponsored by the **Elmira Area Traffic Club** and the **Atlantic States Shippers Advisory Board,** will be held on September 25 in the ballroom of the Mark Twain Hotel, Elmira, N. Y. Herrell DeGraff, Babcock professor of food economics, School of Nutrition, Cornell University, will speak on "Our Food Economy and Outlook." The luncheon is part of the 88th regular meeting of the Atlantic States board being held on September 24 and 25.

The **Transportation Club of Rochester** will hold a round table meeting on September 18 at 12:15 p. m. at the Rochester Chamber of Commerce, St. Paul street. The guest speaker will be Joseph M. Tomaino, assistant manager, Rochester field office, Social Security Administration, whose topic will be "Your New Social Security."

EQUIPMENT AND SUPPLIES

LOCOMOTIVES

The **Atlanta & West Point** and the **Western of Alabama** have each ordered one 1,500-hp. general purpose diesel-electric locomotive unit from the Electro-Motive Division of General Motors Corporation for delivery next November. Estimated cost of each unit is $151,000.

The **Detroit, Toledo & Ironton** has ordered seven 1,500-hp. general purpose diesel-electric locomotive units from the Electro-Motive Division of General Motors Corporation for delivery in January 1953.

The **Georgia** has ordered two 1,500-hp. general purpose diesel-electric locomotive units from the Electro-Motive Division of General Motors Corporation at an estimated cost of $324,000. Delivery is scheduled for next November.

The **Maine Central** has ordered eight diesel-electric locomotive units costing an estimated $1,124,100. The Electro-Motive Division of General Motors Corporation will build six 1,500-hp. general purpose units and the American Locomotive-General Electric Companies two 660-hp. switching units. When delivery, scheduled for late fall, is completed, the MC's summer operations, under present traffic conditions, will be completely dieselized. During the winter, when freight traffic usually increases, the MC will use about six steam locomotives on local trains. Acquisition of the eight new diesel units will be financed by a conditional sales agreement with a syndicate of commercial bankers in Maine.

The **Minneapolis & St. Louis** has ordered two 1,500-hp. SD-7 diesel-electric locomotive units, each with six axles and six motors, from the Electro-Motive Division of General Motors Corporation at a cost of $372,000. Delivery is scheduled for next December.

SIGNALING

The **Baltimore & Ohio** has ordered equipment from the General Railway Signal Company for installation of two relay interlockings, one at Baltimore and the other at M & K Junction, Rowlesburg, W. Va.

George E. Tubb, who has been appointed vice-president in charge of sales of the Lord Manufacturing Company, Erie, Pa. Mr. Tubb joined the company as general sales manager in 1949 and before that time was with the Wright Aeronautical Corporation as manager of the order and contract division.

SUPPLY TRADE

E.-M.D. Plans to Enlarge Florida Branch

Plans for trebling the size of the Jacksonville, Fla., branch of the Electro-Motive Division of General Motors Corporation have been announced by the division.

The branch is one of six in which major diesel locomotive components are rebuilt, with factory methods, under a new product guarantee. It is also a distribution center for replacement parts. At present the plant occupies some 26,000 sq. ft. of floor space. When enlarged—roughly in the shape of a "U" around the present building—some 77,000 sq. ft. will be available. A modern office wing will be built across the front. Plans call for completion of construction work next spring.

The southeastern regional offices of E.-M.D. were recently moved from Washington, D.C., to Jacksonville and are temporarily housed in the Atlantic National Bank building annex. These offices will be moved to the new wing of the E.-M.D. building when construction is finished.

Westinghouse Air Brake Forms Research Lab

The Westinghouse Air Brake Company has announced formation of a

THE NEWEST—and what is said to be the fifth—passenger station to be built on the same location since 1837—now serves Boston & Maine passengers at Lynn, Mass. The new station is also said to be the first on the B&M to radiant heat its waiting room, ticket office, lunch room and lounge.

Harry W. Jones (left), sales representative for the Safety Car Heating & Lighting Co. at Philadelphia, has been moved up to the main sales division, with headquarters at New Haven, Conn. Hubert Medland, sales representative at the Chicago office, has been transferred to Philadelphia to succeed Mr. Jones. Gerald C. Beck (right), has been appointed sales representative at Chicago. Mr. Beck formerly was supervisor of air conditioning and lighting with the Pullman Company.

research laboratory to serve all divisions of the company and its subsidiary and affiliated companies, including European companies in the Westinghouse group. Thomas Meloy, president of Melpar, Inc., Alexandria, Va., a subsidiary, has been appointed director of research for Westinghouse and also chairman of a research and development committee representing the various divisions.

A.C.F. Stockholders Approve Stock Change

Stockholders of the American Car & Foundry Co. at the recent annual meeting in Flemington, N. J., overwhelmingly approved a plan to change the company's common shares from no par to $25 par value, and to increase the authorized number of common shares from 600,000 to 1,000,000 (*Railway Age*, June 30, page 18). Of the additional common shares thus authorized, 60,000 will be used to pay the 10 per cent stock dividend voted at a previous meeting of the board of directors.

C. D. Allen, owner of the Allen-Calleri Corporation, which has been appointed by Railroad Supply & Equipment Inc. as its representative for the West Coast area.

Carleton W. Meyer, heretofore director, economics and costs, of the Chesapeake & Ohio, has announced the opening of an office for the practice of law and for transportation consultation, at 420 Lexington avenue, New York 17.

Carleton W. Meyer

The **Barco Manufacturing Company** is constructing a new plant at 500-530 N. Hough street, Barrington, Ill., for occupancy early in 1953. The new structure will provide 103,000 sq. ft. of floor space for offices, manufacturing, and other facilities, including a cafeteria for employees.

James W. Leis, who has retired as vice-president in charge of operations of the **Magor Car Corporation,** as reported in a recent *Railway Age*, began his career with the Pressed Steel Car Company in McKees Rocks, Pa. In 1910 he joined Magor Car as a foreman, and in 1913 was advanced to plant superintendent. He later worked as plant manager and in 1927 was appointed vice-president of operations. Mr. Leis will remain as a member of the board of directors.

James W. Leis

John I. Somers (above), formerly assistant manager of the hoist department of the Yale & Towne Manufacturing Co., has been appointed sales manager for Worksaver electrically operated hand lift trucks. T. F. Moriarty (below), has been appointed sales manager for manually operated hand lift trucks.

R. L. Terrell, who has been appointed manager of plant No. 3 of the Electro-Motive Division of the General Motors Corporation at Cleveland, Ohio, to succeed A. G. Finigan, who will retire in 1953 and who has been transferred to the staff of the works manager of the division at LaGrange, Ill. Mr. Terrell was formerly manager of the Southeastern region, with headquarters at Jacksonville, Fla.

Chase Supply Company, Railway Equipment Division, has announced appointment of **Edgar L. Morris** to head

Edgar L. Morris

the railway supply department at Chicago. Mr. Morris formerly was western division manager of the E. A. Lundy Company.

H. Fred Jorgensen has been elected vice-president in charge of sales of the **John N. Thorp Company.**

Samuel Moore & Co., Mantua, Ohio, has formed a new wholly owned subsidiary, the **Samuel Moore Seating Company,** which is acquiring the plant and business of **Tru-Car, Inc.,** of Kent, Ohio. Sales and service of Tru-Car seats to transportation industries will be handled by the Transit Products division of Samuel Moore & Co. Officers of the new company are **Samuel D. Moore,** president; **Frank H. Olton,** vice-president, and **A. B. Briggs,** secretary-treasurer. Present factory personnel will be retained, and operations in the Kent plant will continue under direction of **G. J. Diener,** shop superintendent.

A. G. Noble, who retired as a United States Navy Admiral in 1951, has been elected executive vice-president, a member of the executive committee and a member of the board of directors of the **Nordberg Manufacturing Company,** Milwaukee. Admiral Noble

A. G. Noble

comes to Nordberg from the Martin-Parry Corporation of Toledo, where he was vice-president and general manager since his retirement from the Navy. He will take over his duties with Nordberg on October 1.

Howard H. Gamble has been appointed special representative at Los Angeles for the Acme Steel Products Division of the **Acme Steel Company,** Chicago. **Ray D. Vilas** replaces Mr. Gamble as sales representative at Los

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Harold T. Reed, who has headed the traffic department of the Line Material Company, Milwaukee, for nearly 26 years, has been appointed director of transportation. He will be assisted in general supervision of company-wide transportation operations by Charles A. Marves, manager of the traffic department.

A. E. Greco, who has been appointed assistant to vice-president, traffic, of the Pullman Company at Chicago. Mr. Greco joined Pullman in 1945 as assistant to vice-president, public relations, and editor of the Pullman News. For the past year he has served as manager of public relations.

Angeles. **E. J. McGraw,** sales representative, has been transferred from the Pacific Northwest to the San Francisco district, and **Arthur B. Hall** has been transferred from South Central California to San Francisco. **J. P. Brehm** has been appointed sales representative to replace Mr. Hall.

Emil T. Johnson has been appointed director, production and engineering, of the Fibrous products division of the **Union Asbestos & Rubber Company,** Chicago.

The marine and power plant service division of the **Magnus Chemical Company,** Garwood, N.J., has been appointed by **Long-Life New York** as distributors of their product, Long Life.

The **General Steel Castings Corporation,** Granite City, Ill., has an-

W. C. Krautheim

nounced appointment of **W. C. Krautheim** as chief mechanical engineer. **R. E. Peters** has been made assistant

chief mechanical engineer at Eddystone, Pa.

Since joining the company in 1917, Mr. Krautheim has served as assistant

R. E. Peters

engineer and assistant mechanical engineer, and has held the position of mechanical engineer since 1944.

Ethan A. Ball, formerly assistant chief engineer, bridges and buildings, in the fabricated steel construction division of **Bethlehem Steel Company,** has been promoted to chief engineer, fabricated steel construction, to succeed **Jonathan Jones,** who has retired after nearly 50 years in the fabricated steel construction field, 20 of which have been spent with Bethlehem. **W. H. Jameson,** assistant engineer, bridges and buildings, has been appointed assistant chief engineer, succeeding Mr. Ball.

CONSTRUCTION

Baltimore & Ohio.—The $400,000 modernization program for the Camden station in Baltimore is nearly completed. The station, which Abraham Lincoln used during his secretive roundabout entrance into the nation's capital in 1861, was built in 1852. Extensive renovations have modernized the terminal and also restored some of the original features of its facade. There has been extensive remodeling also of the office building which forms part of the terminal, to provide additional space for offices of the mail, express and baggage department and for the road's Baltimore Division engineers.

Canadian National.—Jasper Park Lodge, which was destroyed by fire in July, is to be rebuilt before the opening of the 1953 tourist season, with construction expected to begin on or before September 15. Plans for the new building have not yet been completed, but it has been announced that it will "retain the rustic character of the former building."

Missouri Pacific.—A proposed high-level crossing of the Beaumont, Sour Lake & Western over the San Jacinto Reservoir has entered planning stages. The reservoir is a project for the city of Houston's water supply and construction of a dam to bring it into being was started by the city in January. Because the dam is expected to be complete by December of 1953, the road must conform its line over the reservoir by that time. Preliminary estimates indicate the high line will cost about $2.4 million.

Other major improvement projects currently under way represent an expenditure of about $4,000,000. The largest single item is construction in St. Louis of a single main track and elevated structure over city streets and railway lines as part of a substitute route connecting Lesperance Street yard with Twelfth Street yard, the removal of Poplar Street main track between Seventh street and Wharf street, and a general rearrangement of trackage (*Railway Age*, March 31, page 60). This work, now 29 per cent complete, is being done largely by company forces, and has been estimated to cost $1,240,000. A yard office, locker room and track scale at 23rd street are being built by company forces at a cost of $63,300. Construction of barge loading facilities at Ford, Ill. (*Railway Age*, March 31, page 60) at a cost of $814,000, is now 65 per cent complete. The freighthouse at 7th and Poplar streets in St. Louis is being rearranged for handling of forwarder traffic. The work involves removal of a team track, construction of a paved driveway, and rearrangement of offices by H. B. Deal Company, of St. Louis, and by company forces, at a cost of $220,000. The freight shed at Main and Gratiot streets also is being remodeled for forwarder traffic. This work, estimated to cost $135,000, involves enclosing the present freight shed with masonry walls and continuous doors; relocation of present wash and locker room facilities; and a rearrangement of partitions in the existing office building by the Deal company.

Work outside the St. Louis area includes construction of 4.06 miles of track at Johnston City, Ill., at an estimated cost of $145,000. This trackage, to serve Freeman Mine No. 4, will be used jointly by the Chicago & Eastern Illinois, the Illinois Central, and the MP, with expenses apportioned on a one-third basis. Centralized traffic control is being installed by company signal forces between Gale, Ill., and Raddle, with power crossovers for reversal of traffic at six locations, at a cost of about $774,000. A treated timber trestle at Newport, Ark., will be replaced by a 160-ft. concrete trestle by company forces at a cost of $26,000. Similarly, a 209-ft. concrete trestle will replace a timber trestle at Gypsum, Kan., and track will be raised three feet by company forces for an estimated $36,000. Another such project, involving a concrete trestle 288 ft. long, will be handled by company forces at Chivington, Colo., at a cost of $34,000.

Because of expansion of the Lake Charles (La.) Air Force Base, four miles of main track in the Lake Charles district will be relocated at government expense. The work will be performed largely by government forces and the balance by railroad forces. The project is expected to cost $450,000.

Northwestern Pacific.—Additional yard tracks at Eureka, Cal., will be constructed at a cost of $67,000. Several additional sidings at Willits, and a single additional siding at Scotia, will be constructed at a total cost of $25,000.

Petaluma & Santa Rosa.—General reconditioning of tracks at Petaluma, Cal., will be carried out at a cost of $19,500.

Spokane, Portland & Seattle.—Projects representing total expenditure of more than $400,000 are being handled by contracting firms, as follows:

Construction of an 8-ft. by 8-ft. by 375-ft. reinforced concrete box culvert by J. A. Terteling & Sons, Inc., Boise, Idaho ($117,000), as part of a line change in connection with the bypassing of two bridges on the Vernonia branch; miscellaneous work, to be completed about October 31, at seven bridge sites at various points, including construction of a reinforced concrete culvert, concrete abutments, piers and headwalls, by the General Construction Company, Portland, Ore. ($131,000); subgrade for three rip tracks and grading of roadways at Albany yard, Albany, Ore., by the Pioneer Construction Company, Portland and company forces ($48,000); and construction of subgrade and culverts for a 4,700-ft. passing track, and laying rail and automatic switches at Willbridge, Ore., by the Pioneer Construction Company and railroad forces ($111,000). The last two projects are scheduled for completion by November 15.

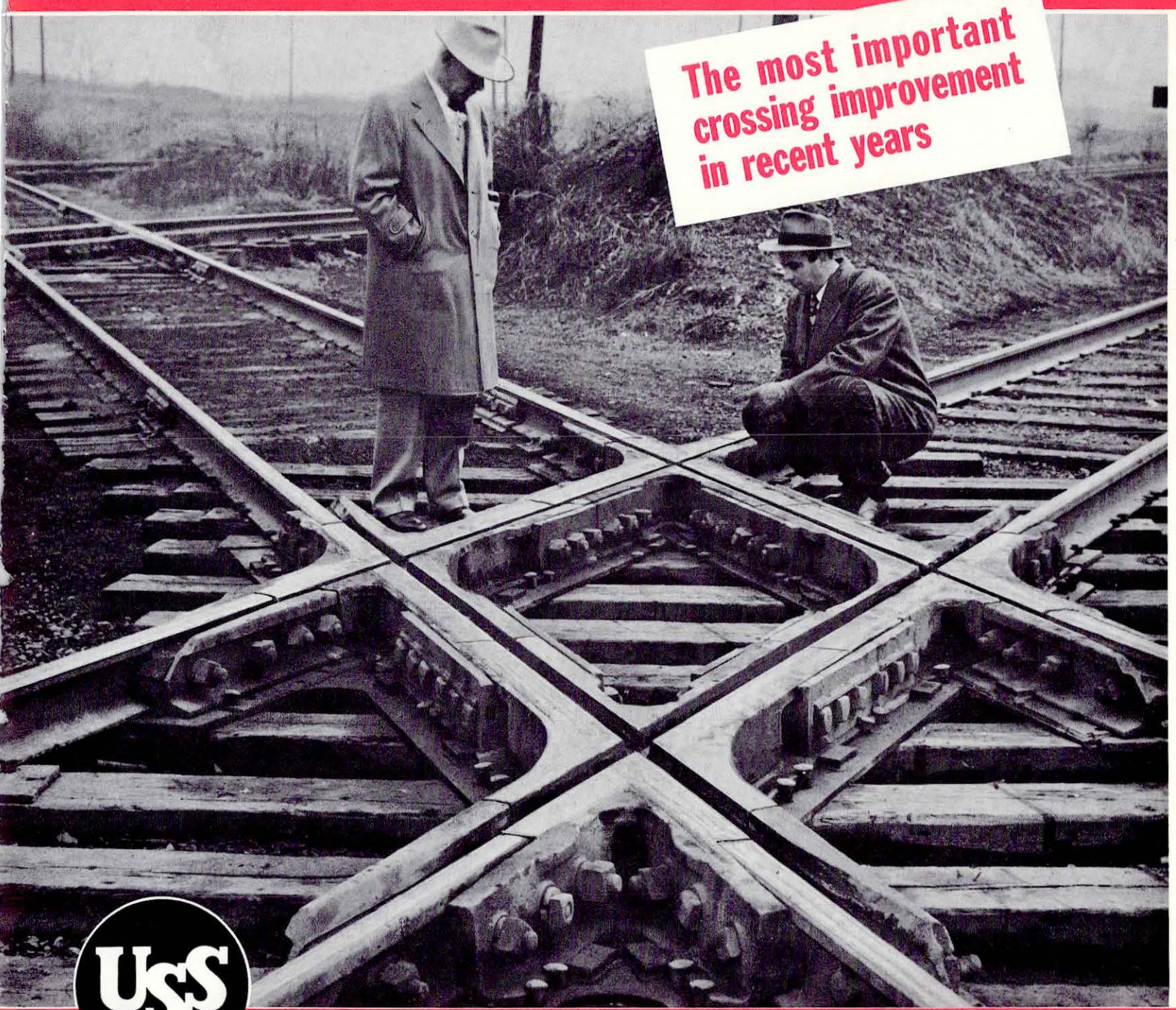
St. Louis Southwestern. — Construction of centralized traffic control from Pine Bluff, Ark., to Brinkley, 67 miles, has been authorized. The work will be performed by company forces at an estimated cost of $850,000.

Terminal Association of St. Louis.—Work has begun on construction of diesel servicing facilities at CD yard in East St. Louis, Ill. The work, which will cost an estimated $100,000, will be performed by company forces, except that plumbing and electrical installations will be handled by local contractors.

Texas & Pacific.—Modernization of the passenger station at Abilene, Tex., is being carried out, at a cost of $90,000, by Albert A. McAlister, under contract.

U·S·S MANGANESE STEEL RAILROAD CROSSINGS

with solid-pedestal base and depth-hardened corners



USS TRADE MARK

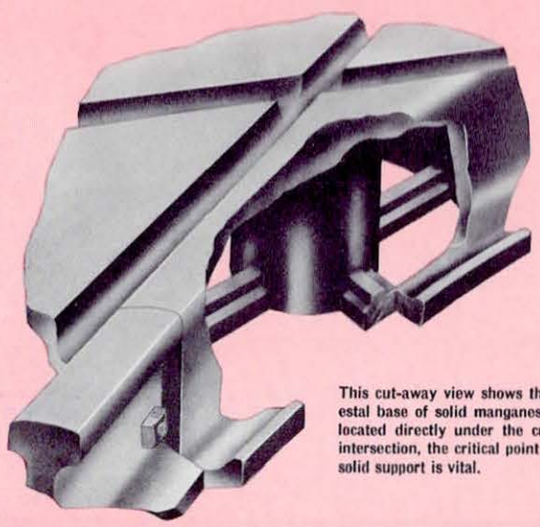
The U·S·S Manganese Steel Railroad Crossing being inspected here is a typical pedestal-base type. Installed at a point where the Birmingham and Southern crosses the St. Louis-San Francisco, this crossing supports about 85,000 gross tons of traffic every 24 hours. Having given well over two years' service at the time this photograph was taken, this crossing has handled more than 75,000,000 gross tons of rolling stock and is still in very good condition.

ADVANTAGES of the Solid-pedestal base

- extra support under crossing intersections
- longer life
- improved physical properties
- sounder metal

Stronger . . . safer . . . and more durable

U·S·S MANGANESE STEEL



This cut-away view shows the pedestal base of solid manganese steel located directly under the crossing intersection, the critical point where solid support is vital.

COMPARE THESE DIAGRAMS

THE OLD WAY

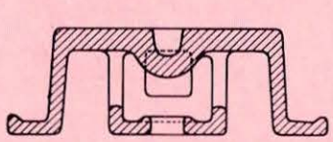


FIG.1

Top and cross-section views of the old-style manganese steel railroad crossing. Note the numerous ribs required for bracing the intersection. Here, where wheel impact is most severe, the ordinary crossing is hollow . . . a construction that invites failure.

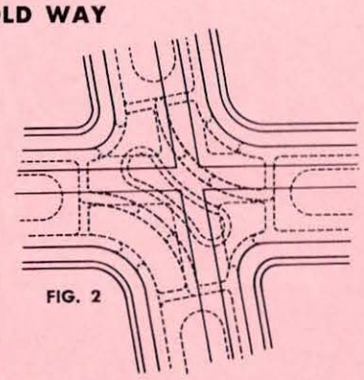


FIG. 2

THE NEW WAY

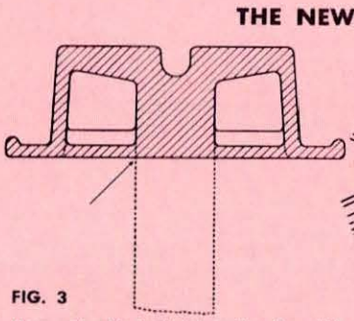


FIG. 3

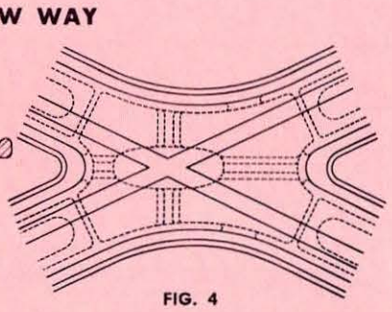


FIG. 4

Here, under the track intersection, the solid-pedestal base of the U·S·S Manganese Steel Crossing gives firm, additional support where extra strength is needed. The dotted portion in Fig. 3 indicates the size of the reservoir head that is cast integrally over the crossing intersection (inverted when cast). This reservoir (or riser) weighing from 200 to 350 lbs. is cut off and scrapped after the casting has solidified.

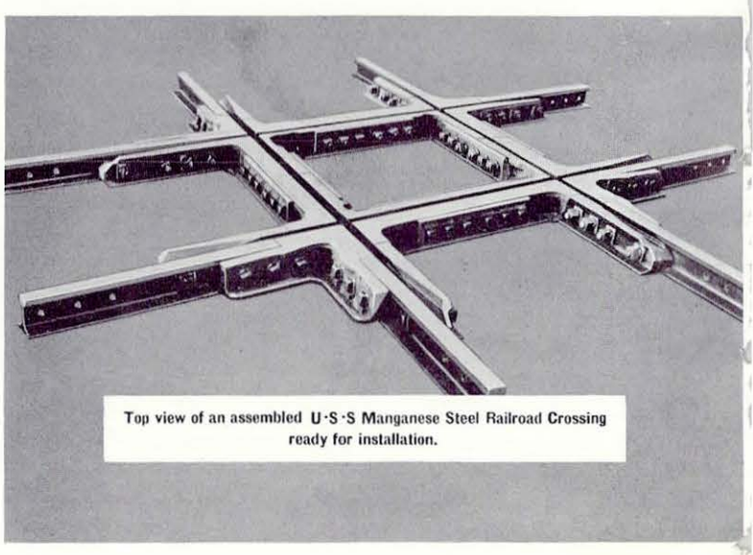
Solid-pedestal base adds strength where strength is needed.

A solid pillar of tough manganese steel directly under all crossing intersections is the exclusive feature that distinguishes this newly developed crossing. Here, where maximum strength is required to resist the destructive pounding of today's faster, heavier trains, the U·S·S Manganese Steel Railroad Crossing is extra strong.

The solid-pedestal base, an integral part of the casting, substantially reduces deflections resulting from wheel impact, a major cause of internal cracks that ultimately lead to complete deterioration of crossings. This vertical pillar of solid metal, rigidly reinforced, is far stronger than any other type of intersection support used today.

Metallurgical advances have improved new U·S·S Manganese Steel Railroad Crossings in still another way. By using more feed-metal (5 to 10 times more than is used in ordinary crossings) and exercising closer control over feeding, liquid metal under greater pressure flows unrestricted at the proper time to the solidifying area, preventing the formation of many of the pores and cavities characteristic of manganese castings.

Thus, in addition to the extra vertical support provided by the solid-pedestal base, the entire casting is sounder, freer of internal flaws, and less susceptible to spalling, chipping or cracking.



Top view of an assembled U·S·S Manganese Steel Railroad Crossing ready for installation.

RAILROAD CROSSINGS

lower in maintenance
. . . smoother riding

Depth-hardened corners reduce maintenance costs . . . assure smooth riding from the start.

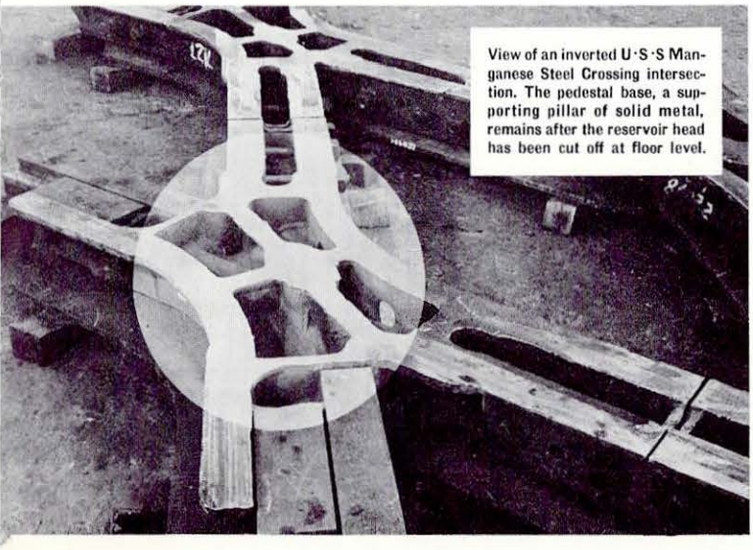
Depth-hardening is another valuable, money-saving feature of the improved U·S·S Manganese Steel Railroad Crossing.

The ordinary manganese steel crossing is produced to a surface hardness of approximately 200 Brinell. The wheel impact of the first long train is depended on to work-harden the surface to approximately 400 Brinell—the hardness required to stand up under modern rail traffic.

Though crudely effective, this wheel pounding also batters down the intersection corners—makes it necessary to build them back to normal track level repeatedly by welding and grinding. This costs money.

In contrast, the improved U·S·S Railroad Crossing has raised pads cast integrally on the three critical crossing corners of each intersection. These are shop-hammered to develop the desired hardness, and then ground down to track level to assure smooth riding. This controlled pre-hammering insures the proper depth hardness *before* installation, eliminates almost entirely the damaging effect of subsequent wheel batter, and virtually eliminates maintenance costs.

U·S·S Manganese Steel Railroad Crossings are also available without the Depth-Hardened treatment.



View of an inverted U·S·S Manganese Steel Crossing intersection. The pedestal base, a supporting pillar of solid metal, remains after the reservoir head has been cut off at floor level.

ADVANTAGES of the Depth-Hardened Corners

- pounding down of corners after installation virtually eliminated
- maintenance costs greatly reduced
- longer life due to less intersection failures
- smooth riding without rebuilding

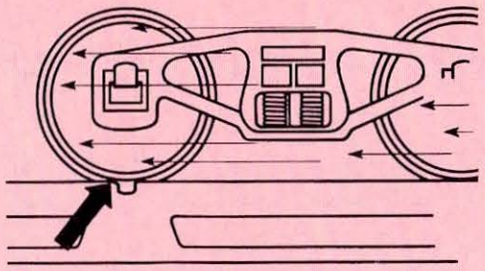


FIG. 5 This is what happens to the corners of ordinary manganese steel crossings as the first long train batters across its intersection. Before wheel pounding increases surface hardness to approximately 400 Brinell, the corners are pounded down about ¼", thus requiring extensive rebuilding.

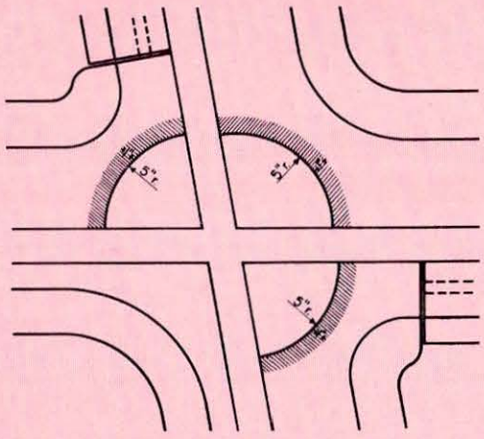


FIG. 6 Diagram showing top view of the new U·S·S Depth-Hardened Crossing. Note the ¾" x 5" pads on the three critical corners. To provide sufficient hardness, these pads are shop-hammered down prior to installation of the crossing.

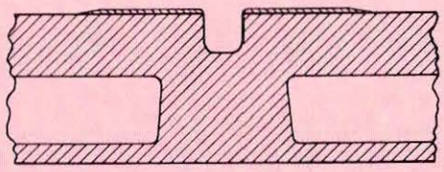
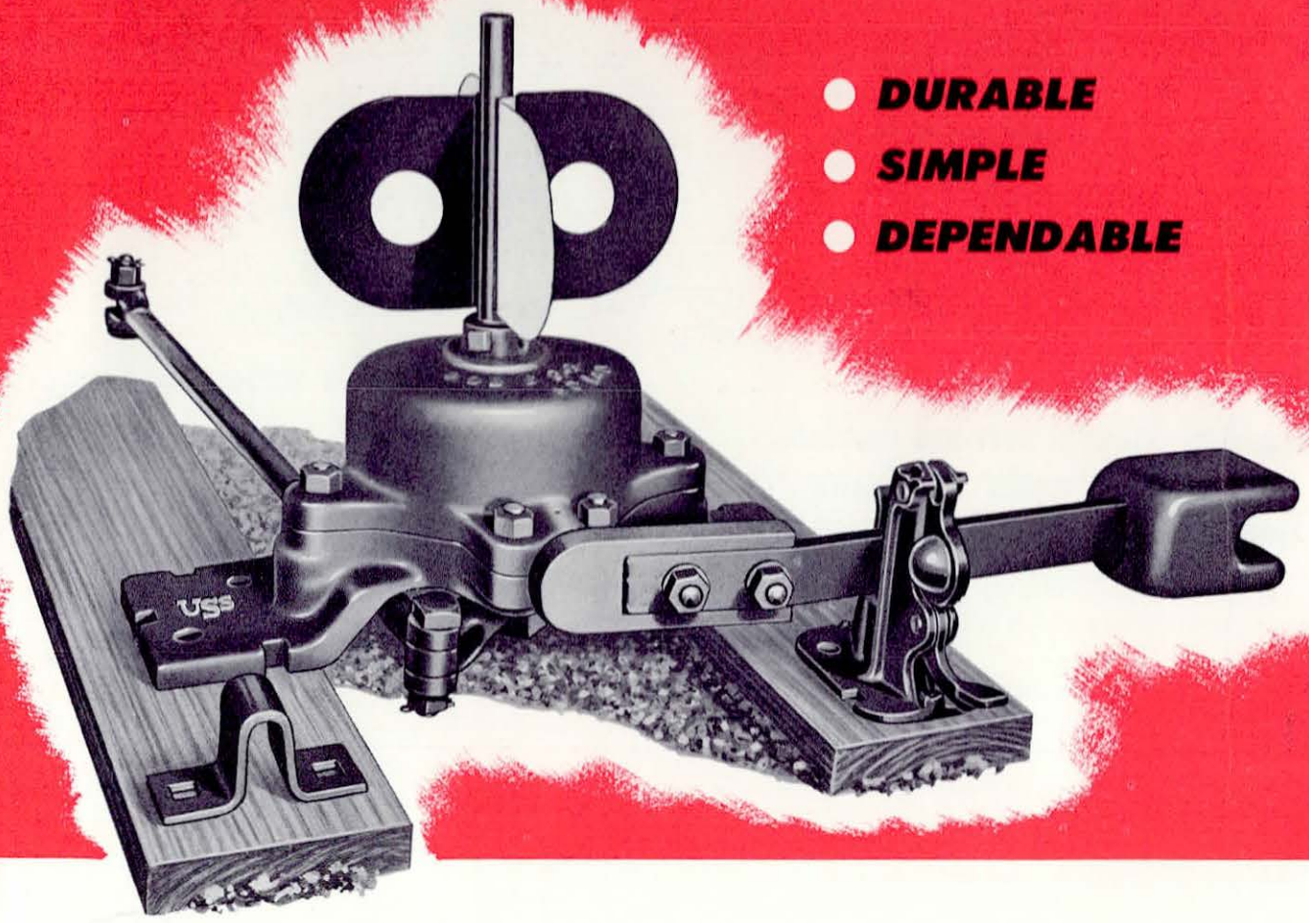


FIG. 7 Cross-section view shows pads cast integrally with the crossing, before being peened down to proper track level under forging hammer.

The Depth-Hardened Crossing can, for all practical purposes, be installed and forgotten. Maintenance requirements are negligible. Interruptions of service are rare. What's more, it lasts longer! The destructive impact of wheels dropping from a normal level to a depressed level, the major cause of early formation of cracks in ordinary crossings, is minimized.

U·S·S NO. 140 *Improved* SWITCH STAND

- **DURABLE**
- **SIMPLE**
- **DEPENDABLE**



Modern Design assures efficient operation of yard and main line switches

THIS modern, heavy-type switch stand is consistent in design and quality with present-day trackwork standards. It conforms to the A.R.E.A. specifications for ground throw switch stands. It is automatic unless locked in position with latches.

The U·S·S No. 140 Improved Switch Stand is recommended for either main line or yard use. Construction throughout is engineered and built to assure safe, dependable, long-time service. The base and cap castings are large and strong. The large bearings reduce to a minimum the amount of wear and prevent any wobble of targets and lamps. The spindle is locked to the segment in a square connection. When assembled, the spindle, segment and target rod form one unit and ease of adjustment is obtained by the removal and replacement of one bolt. The hand lever socket and pinion is made integral with a connecting shaft, thus eliminating the possibility of either lever or pinion working loose on the bearing shaft.

The threaded lever at the base of the spindle is adjustable for any desired throw of switch points from 3″ to 7″.

This stand is furnished with the following variations: (*1*) *With low, intermediate, or high target and lamp tip.* (*2*) *With lamp tip only—no target.* (*3*) *Spindle Cap—no target or lamp tip, but with provision for either if required.*

All target rods have standard lamp tips forged integrally, thus eliminating a separate part.

Standard target heights are—low, 1′6″, intermediate, 4′6″, and high, 6′6″. Standard red and white targets will be supplied when required, but special patterns or colors can be furnished.

When switch stand is ordered for rigid split switch, the short rigid connecting rod is included. When ordering for spring split switch, no rod is furnished unless otherwise specified, the long connecting rod being part of the head rod of the spring split switch. If desired, a short spring connecting rod can be furnished with the stand to connect to any switch with a rigid head rod.

When stands are ordered separately, customer should specify the thickness of head rod on switch, also diameter of hole in head rod.

One latch and one rest are generally furnished with stands for rigid split switch, and two latches for spring split switch.

All these fittings may be rearranged to suit customer's requirements.

FOR ALL YOUR TRACKWORK REQUIREMENTS

- **U·S·S RAILS**
  Standard, Controlled Cooled and End Hardened
- **U·S·S JOINT BARS**
- **U·S·S TIE PLATES**
- **U·S·S SWITCHES**
- **U·S·S FROGS**
- **U·S·S CROSSINGS**
- **SPECIAL TRACK LAYOUTS**

UNITED STATES STEEL COMPANY, PITTSBURGH · COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO
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UNITED STATES STEEL

Litho in U.S.A.

G-E Floodlighting Adds Speed, Safety to Your Yard Operations

GENERAL ELECTRIC YARD LIGHTING HELPS YOU TO:

- **increase car movement at night**
- **increase security from theft**
- **increase safety for yard personnel**
- **increase protection to rolling stock and lading.**

These are some major benefits gained when the Nickel Plate installed four floodlight towers, each carrying 15 G-E 1000-watt lamps, in its principal Cleveland yards. Ask your G-E representative to show you how General Electric yard lighting can improve your operations. *General Electric Company, Schenectady 5, N.Y.* 152-33

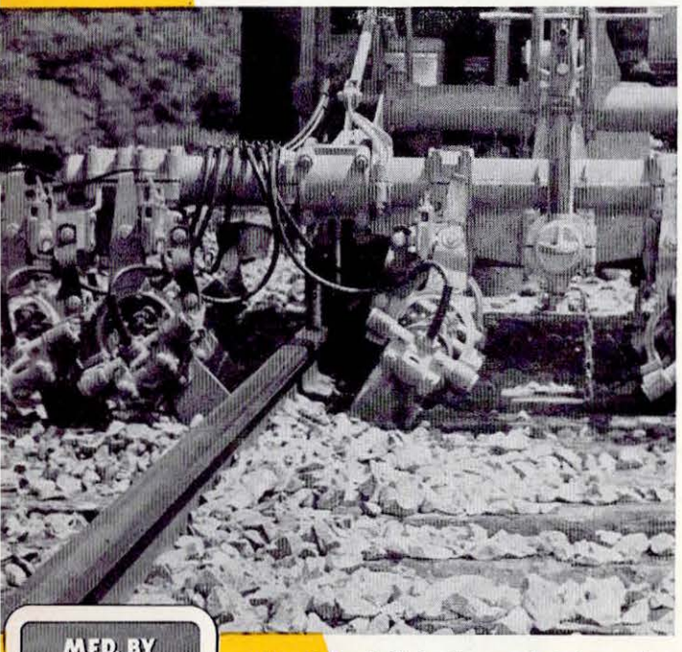
You can put your confidence in—

GENERAL ELECTRIC

DESERVING OF Top Spot ON YOUR 1953 MAINTENANCE BUDGET

JACKSON MULTIPLE TAMPERS

Every bit of evidence points to the fact that you will miss a terrific bet if you do not include an adequate sum in your 1953 maintenance budget for JACKSON MULTIPLE TIE TAMPERS! Scores of these machines have thoroughly proved: 1. That they will more than save their cost in a single season. 2. That they will enable you to achieve the finest, most uniform track in a single operation. 3. That they are versatile beyond comparison — as efficient in very low-lift surfacing operations as in major ballast insertions. 4. That with them you will get your work done at the lowest possible cost per mile. Why not jot down "JACKSON MULTIPLES" on your budget memorandum, right NOW? Write, wire or phone for any data desired.



The Only Multiple Tamper that tamps the VITAL SPOT — the load-bearing zone directly beneath the rail.

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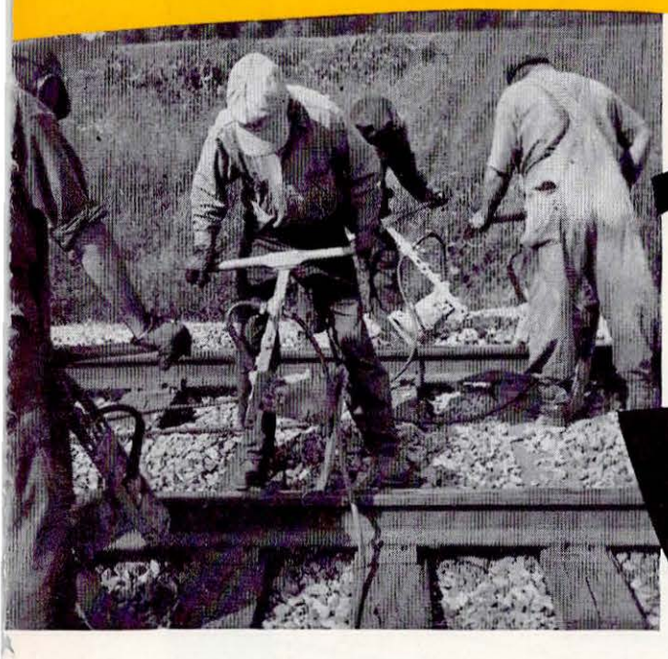
ELECTRIC TAMPER & EQUIPMENT COMPANY

LUDINGTON, MICHIGAN

And DON'T OVERLOOK-FOR 1953 *the* GREATEST MULTIPLIER *of* SECTION GANG Productivity!



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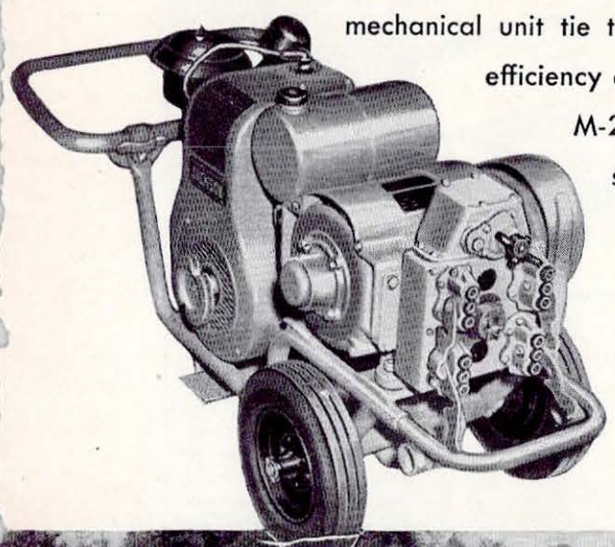


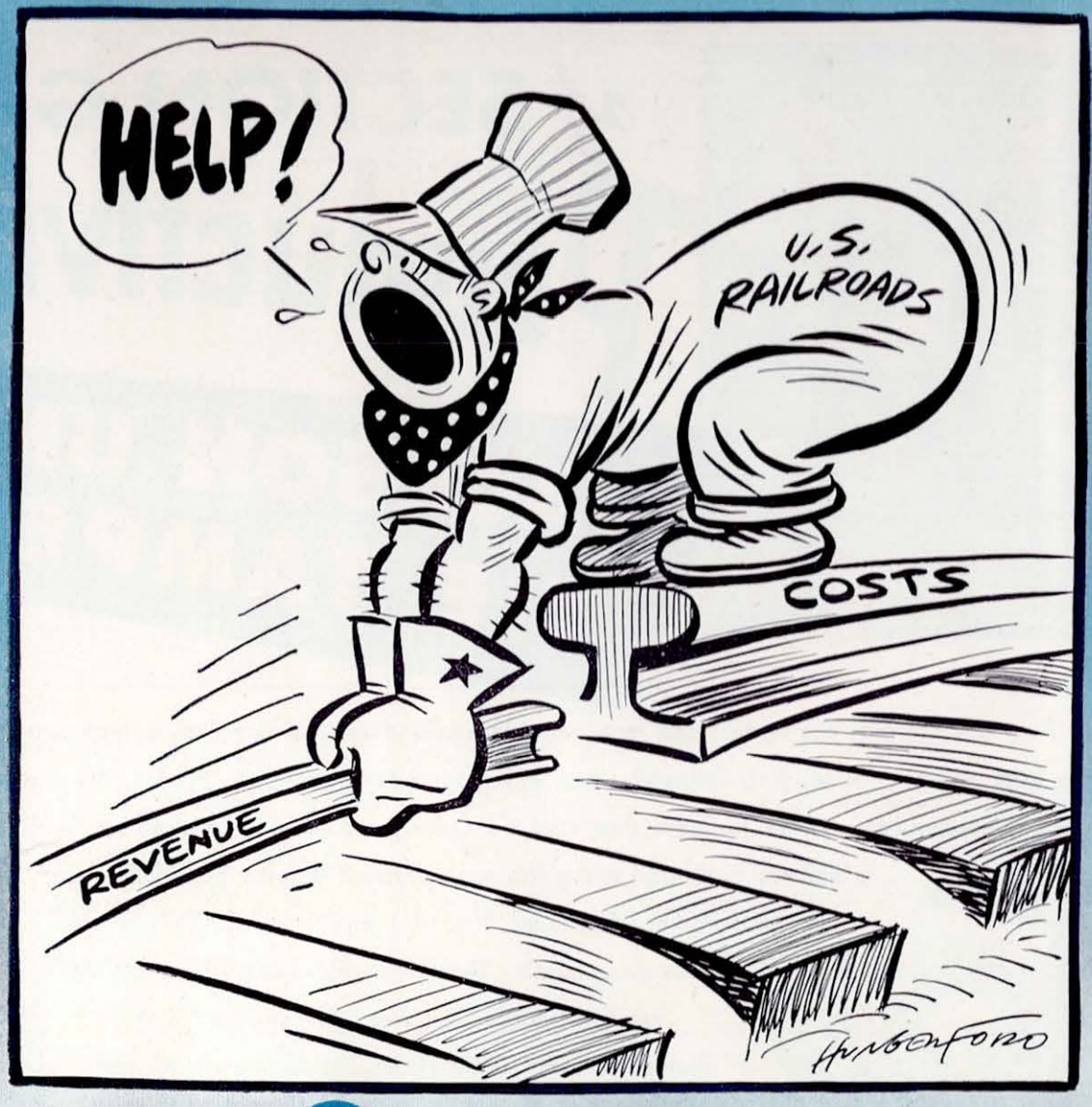
THEY'RE IDEAL FOR . . . EXTRA GANG OPERATION, TOO!

With JACKSON 4-Tamper outfits on your sections you are also well equipped for extra gang operations, for they may be grouped for any major ballasting job with results that are exceeded only by the JACKSON Multiple Tamper. Let us tell you more about them.

ELECTRIC TAMPER & EQUIPMENT COMPANY

LUDINGTON, MICHIGAN

Trying To Make Ends Meet — By Hungerford



E

Edgewater Steel Company

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Serving America's Railroads with

ROLLED STEEL TIRES
ROLLED STEEL WHEELS
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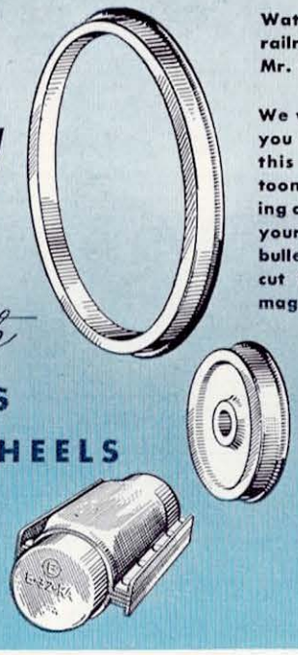
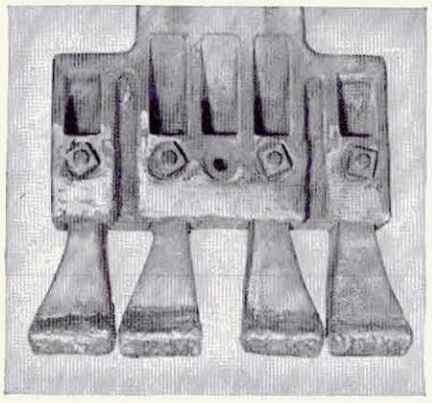


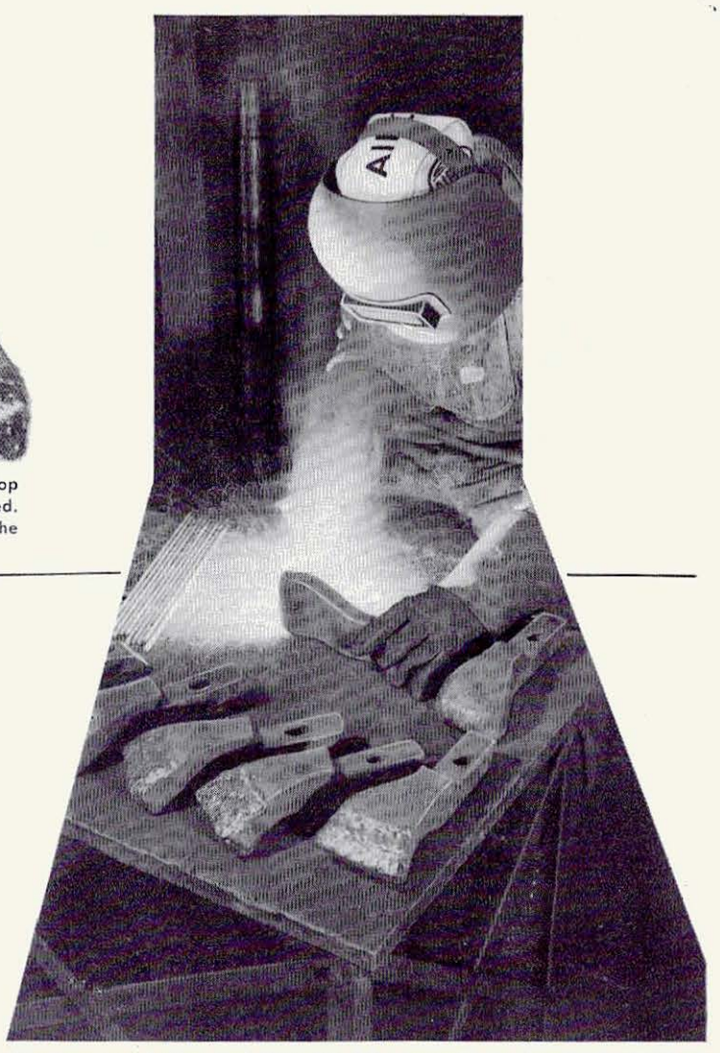
Watch for other railroad cartoons by Mr. Hungerford

We will be glad to send you enlarged copies of this Hungerford cartoon (without advertising copy) for posting on your office and shop bulletin boards, or a cut for your company magazine, at cost.

Fully worn bar (center) shows extent of deterioration prior to shop build-up and hardfacing. Outer bars shown have been hardfaced. Reclamation of these tamper bars is effected for a fraction of the cost of new bars.



Close-up of hardfaced bars and shoes ready for service.



One man, one holder, and Airco No. 361 electrodes can handle the build-up operation.

SAVE ON TAMPER BAR AND SHOE REPAIR with Airco Hardfacing Alloys

Maintenance-of-way personnel are all too familiar with the condition of tamper bars after the continuous shock of beating coarse-hard aggregate to pack in track ballast.

Many roads have found a way to economically extend tamper bar and shoe service life with Air Reduction hardfacing electrodes. Here's how.

A routine build-up program using Airco No. 361 electrodes brings the worn parts back to size. Following the size build-up, Airco Tungtube No. 20 electrodes provide a hardfaced surface which lasts two to three times longer in service than untreated bars. These road-tested Airco electrodes are your guarantee of sound hard-metal deposits at minimum cost.

You can learn how Airco Hardfacing techniques can effect savings for your maintenance-of-way abrasion and impact resistant operations. An experienced Airco Railroad Representative is ready to supply you the full details. Just write him at your nearest Airco Office.

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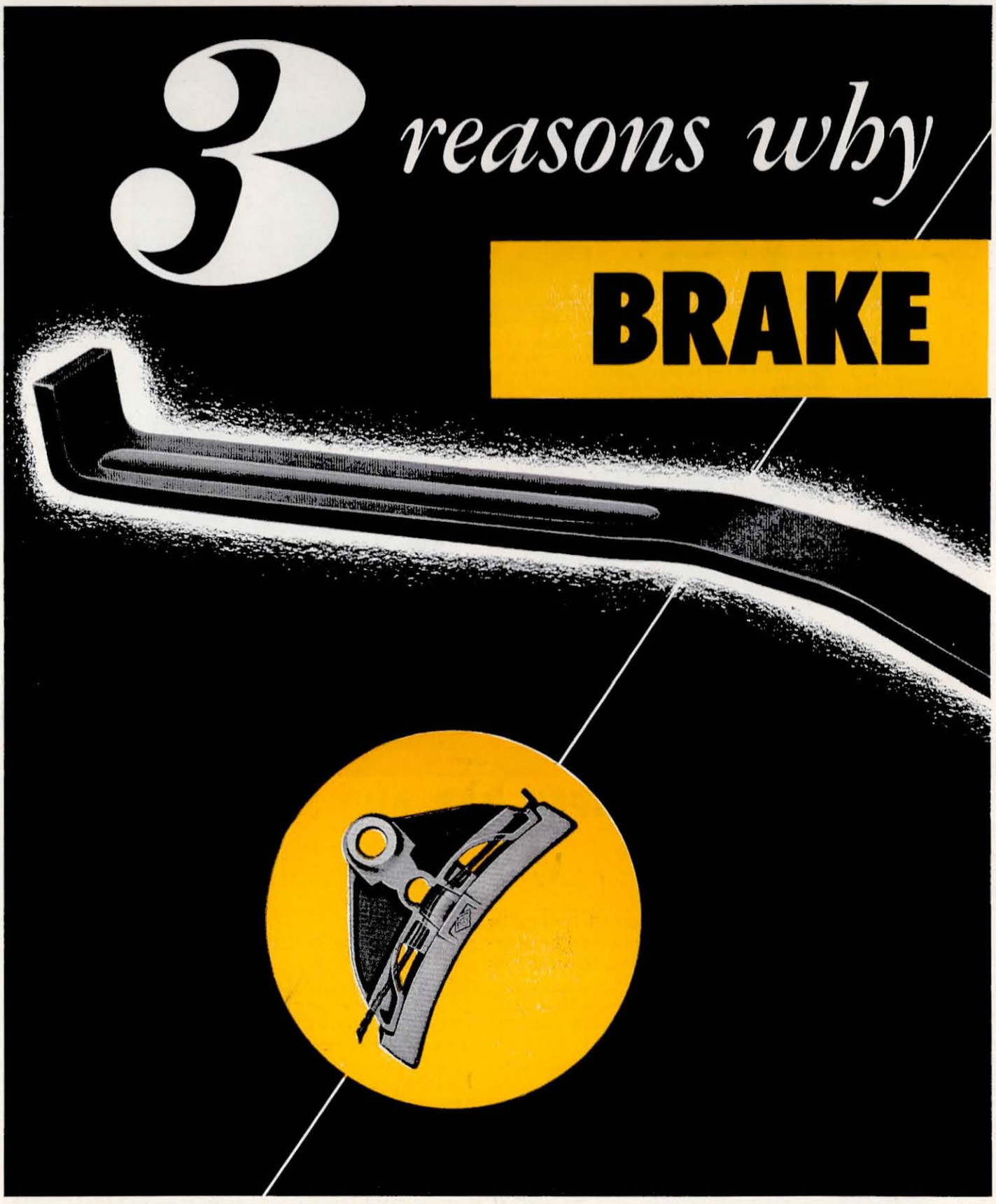
AN AIR REDUCTION PRODUCT

3 reasons why

BRAKE



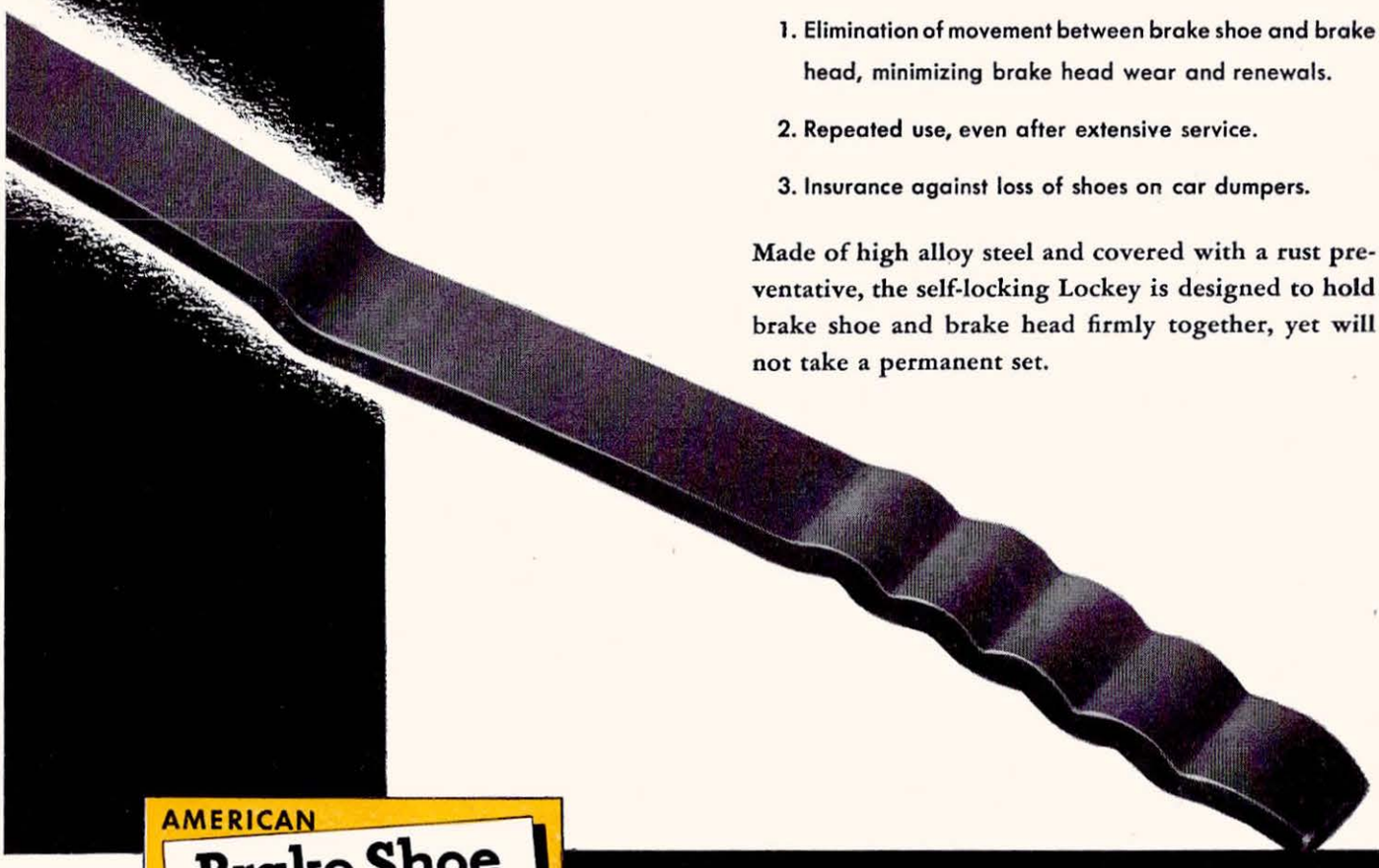
the

SHOE LOCKEY

provides *GREATER ECONOMY on freight equipment*

1. Elimination of movement between brake shoe and brake head, minimizing brake head wear and renewals.
2. Repeated use, even after extensive service.
3. Insurance against loss of shoes on car dumpers.

Made of high alloy steel and covered with a rust preventative, the self-locking Lockey is designed to hold brake shoe and brake head firmly together, yet will not take a permanent set.



AMERICAN Brake Shoe COMPANY

BRAKE SHOE AND CASTINGS DIVISION

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the modern engineering material for permanent railroad structures

You get the finest of permanent construction when you build with glulam timbers of Timber Structures, Inc. They are formed of thoroughly seasoned material...to the exact shape desired...and in any size and length. Dimensionally stable, they "stay put" without maintenance.

Glulam timbers are highly resistant to destruction by fire, due to the natural insulating qualities of wood, and when used in conjunction with other permanent materials earn favorable insurance rates. Preservative treatments, when necessary, give lasting protection against attack by termites or moisture.

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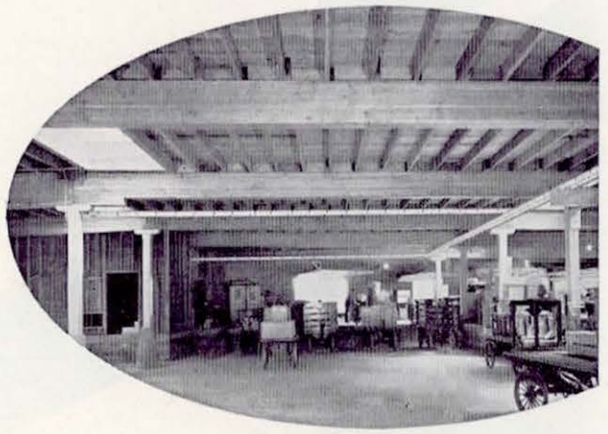
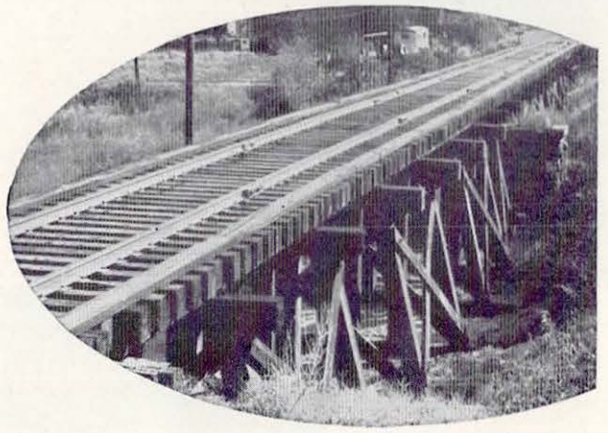
Passenger Stations



Freight Houses and Warehouses



Bridges

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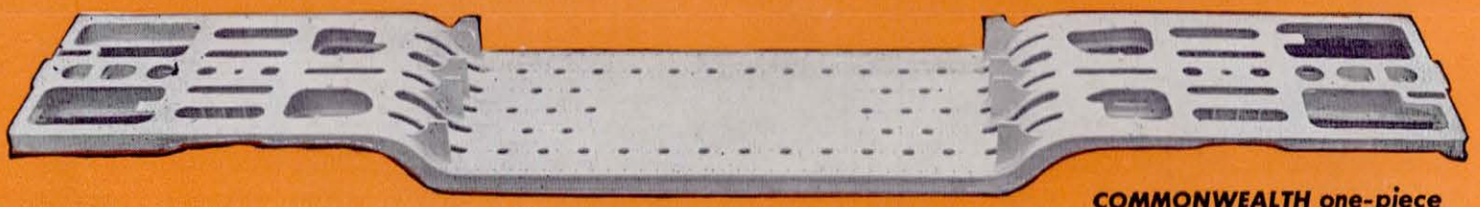
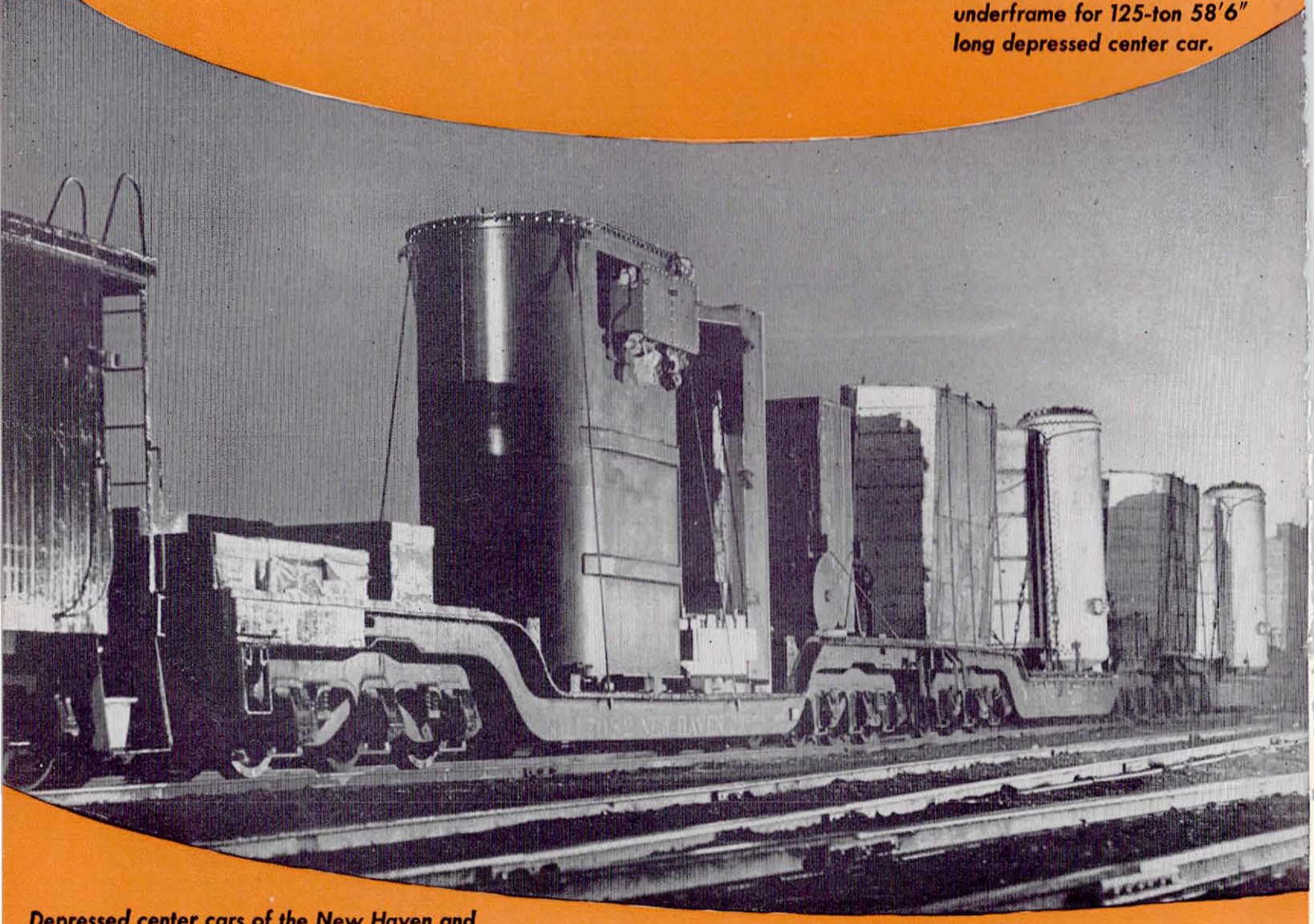


***COMMONWEALTH** one-piece underframe for 125-ton 58'6" long depressed center car.*



Depressed center cars of the New Haven and the Erie Railroads transporting boilers and other equipment for U. S. Navy destroyers.

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CAST STEEL UNDERFRAMES AND TRUCKS

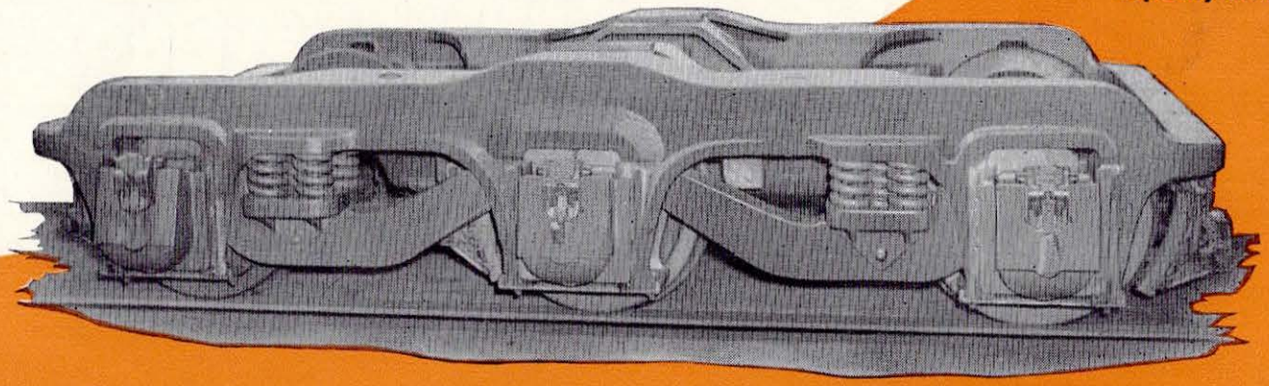
Are Transporting Heavy Loads

COMMONWEALTH one-piece cast steel underframes and 6-wheel trucks of proven design are being used on more and more heavy duty freight cars, assuring high availability and low maintenance expense.

These underframes combine the important elements of great strength with minimum weight, extreme durability and simplicity. For flat cars, depressed center cars and pulpwood cars, the one-piece design makes possible a lower car height from rail to loading floor, permitting easier loading and higher loads. It also provides a uniform surface for floor application.

COMMONWEALTH 6-wheel equalized trucks for high capacity freight cars provide positive equalization and adequate spring capacity which are essential to efficient, safe, economical operation. The rugged one-piece truck frames with machined integral pedestals assure true alignment of wheels and axles.

For higher availability and true upkeep economy in flat cars, depressed center cars, pulpwood cars, sulphur-carrying cars, ore cars, well cars and others — build them with COMMONWEALTH one-piece underframes and trucks.



***COMMONWEALTH** 6-wheel equalized truck for high capacity freight cars.*

STEEL CASTINGS

EDDYSTONE, PA.

JUST RIGHT

for railway Diesels

GULF DIESELMOTIVE OIL

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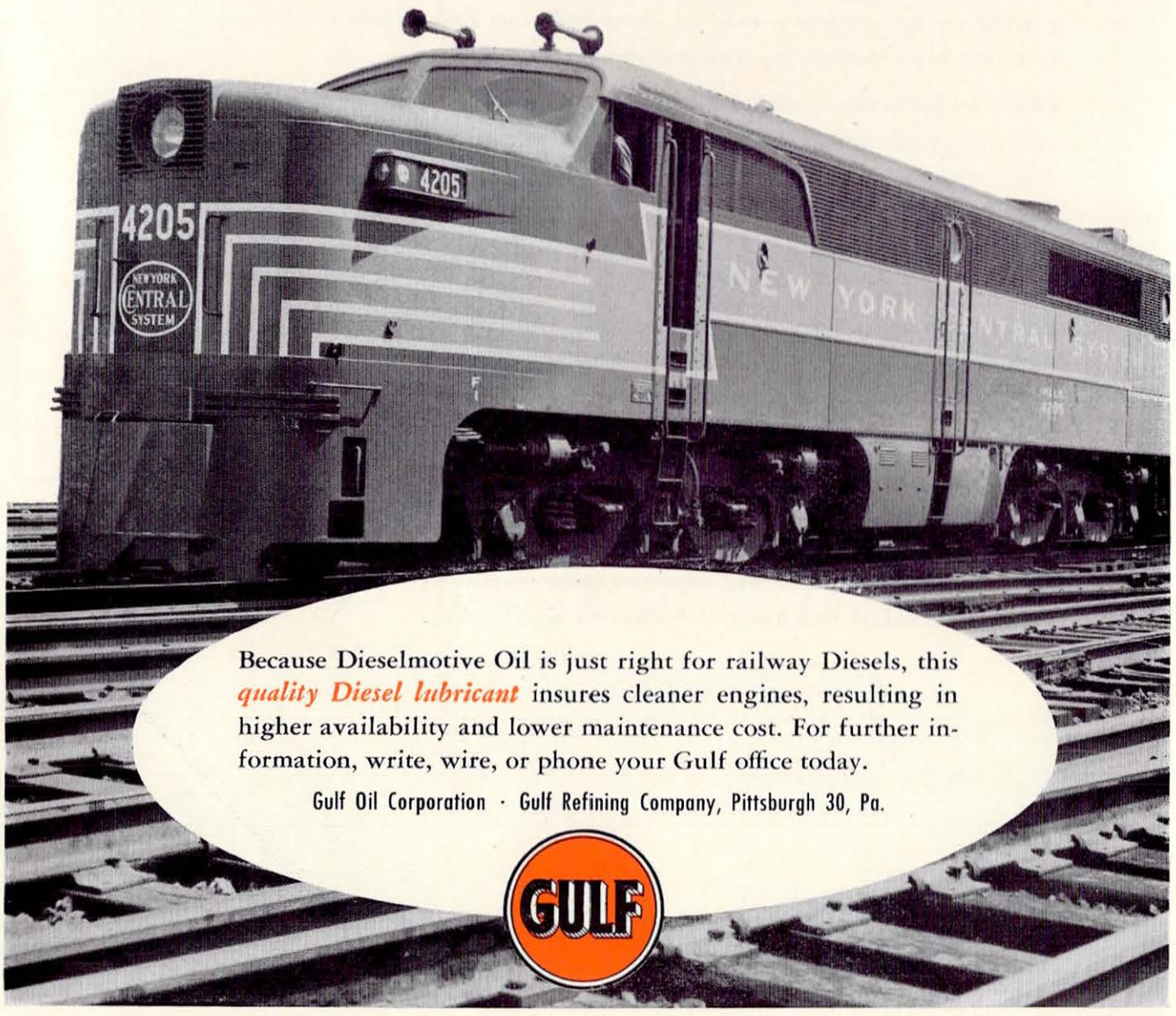


Because Dieselmotive Oil is just right for railway Diesels, this *quality Diesel lubricant* insures cleaner engines, resulting in higher availability and lower maintenance cost. For further information, write, wire, or phone your Gulf office today.

Gulf Oil Corporation · Gulf Refining Company, Pittsburgh 30, Pa.

GULF

The Handi-Riter

Fanfold forms with floating reusable carbon paper are now available for handwritten procedures in the Repeat-O-Pak Handi-Riter, produced by Standard Manifold Company, Chicago 6. This device is a lightweight portable box with an arrangement of carbons and forms similar in nature to those found on modern billing machines. Repeat-O-Pak pencil carbons, varying in weight to meet individual requirements, will give as many as ten clear handwritten copies, the manufacturer states. When a completed form is removed from the Handi-Riter carbons are automatically ejected from that form and reset in the form next to be used.

Diesel-Electric Locomotive Crane

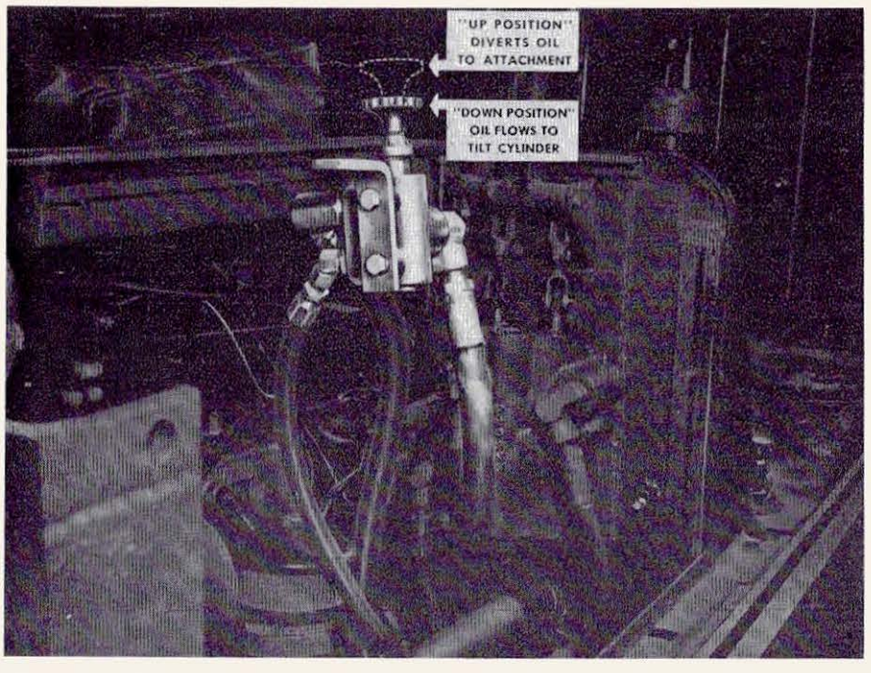
A large capacity diesel-electric locomotive crane has been announced by Bucyrus-Erie Company, South Milwaukee, Wis. The maximum rated lifting capacity of 250 tons at 17½ ft. radius makes this crane particularly suitable for wreck duty, bridge erection and dismantling, and for work requiring heavy lifting. It is available in non-propelling and self-propelling units. The propelling mechanism, a combination of spur and bevel gearing, may be disengaged by pinion shifters from the outside of the body when it becomes necessary for the crane to travel in a train.

It is mounted on a car body, with 11-ft. wheel base trucks as standard, of all-welded construction with deep box-girder side members tied together by welded structural units, and provided with heavy-duty cast-steel center and end outriggers. An all-steel cab encloses the machinery, the operator's position and control levers, and has removable panels to facilitate the maintenance, inspection and repair of the machinery.

The swing machinery is powered by an independent direct-current motor under Ward Leonard control and is driven through a combination of worm, spur, and bevel-gear reductions. The swing unit is entirely independent of all other motions of the crane and has positive controls and brakes.

The power plant consists of a General Motors twin 6-71 diesel engine of 350 b.hp. at 1,800 r.p.m., driving a generator set which supplies direct current to the main and swing motors. Battery-charging generators and a starting motor are provided for each engine. The crane may be operated on only one engine with no effect on lifting capacity but at a reduced speed. Each engine has a radiator heating unit which may be operated by the Kohler light plant on the crane or by an outside source of power.

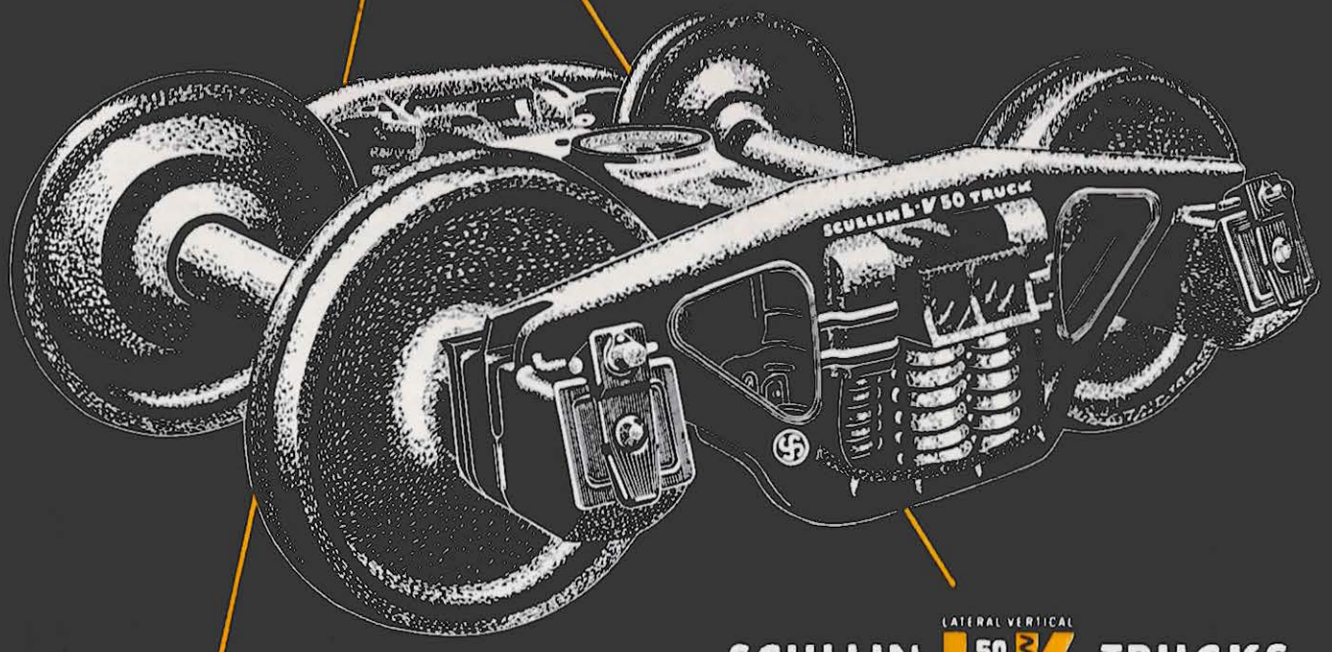
Three hoists are provided—main, auxiliary and whip.



Diverter Valve for Hydraulic Attachments

A newly designed diverter valve, facilitating economical field installation of a number of special hydraulic attachments, has been announced by the Industrial Truck Division of the Clark Equipment Company, Battle Creek, Mich. The valve enables the truck's hydraulic system for tilting the upright to be utilized to operate attachments using the standard tilt lever for control. Simultaneous operation of the attachment and the tilt cylinders is impossible. The new valve is advantageous where installation of an auxiliary might prove too costly or time-consuming; or in the case of older model trucks where a field installation would otherwise be impossible.

Lifting a 250-ton test load.



LATERAL VERTICAL
CUSHIONED MOTION

SCULLIN L 50 V TRUCKS

THE SMOOTHEST TRAFFIC-BUILDERS BETWEEN LCL AND YOUR RAILS

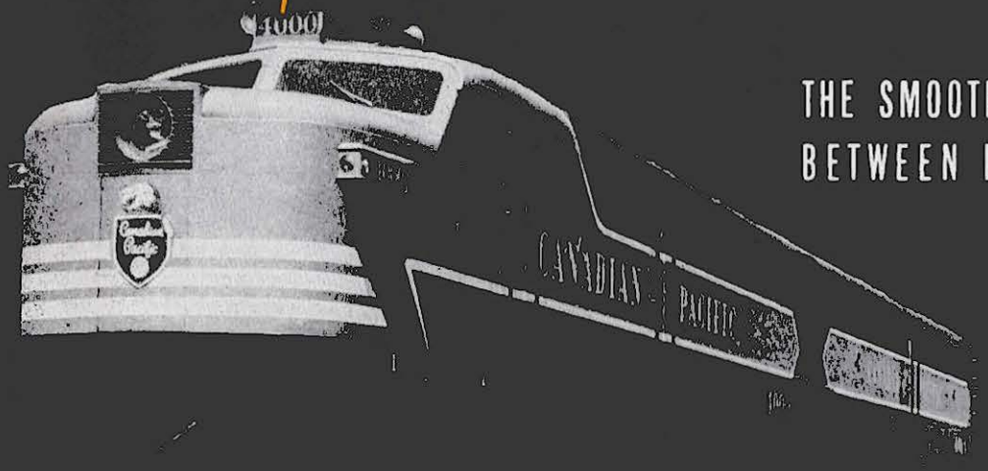


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Photo courtesy Canadian Pacific Railway . . .

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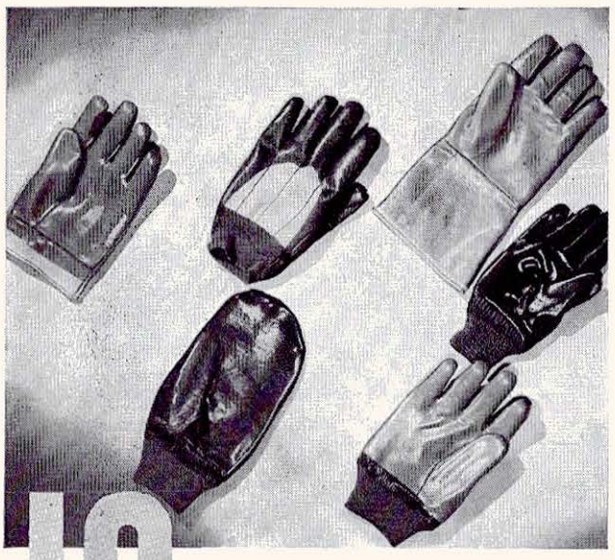

10 TIMES THE WEAR

Work gloves wearing out fast? Get gloves coated with VINYLITE Brand Resins. They'll outlast ordinary types as much as ten to one. And they'll give better protection to workers' hands.

Protection against abrasion, flame, splinters, broken glass . . . Protection against acids, caustics, solvents, oil, water . . . Protection under conditions that wear out ordinary gloves ten times as fast!

Welders or wood choppers – men spraying paint, handling rough steel, concrete blocks, wire . . . all need the protection of these rugged gloves. The flexible, clinging VINYLITE Resin Coating assures a safe, firm grip. It won't crack or peel, sticks fast to glove fabric, permits easy cleaning.

With a wide range of colors, extremely inert, glove coatings are a typical application of the qualities of VINYLITE Resins, so useful to scores of products in defense and basic industry. Coatings based on VINYLITE Brand Resins are easily applied by dip, brush, or spray. They bring long-lasting protection to a variety of surfaces, including metal, concrete and masonry. Their versatile properties may be useful to your operations. Ask us about your specific needs and send for a list of suppliers of gloves coated with VINYLITE Brand Resins. Write Dept. NE-73.

Data courtesy Plasticote Glove Co., Inc.
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TRADE MARK

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Benchmarks and Yardsticks

NOT LONG AGO in a medium-sized city there was a meeting of businessmen at which government-business relations were discussed. A question was asked about government relations with transportation—weren't the railroads over-regulated, and just what changes in the law were needed to limit regulation within reasonable bounds?

There were several railway officers present, but none of them felt qualified to give a specific answer to this question. Later on in the discussion the observation was made that the railroads had done a good deal of generalized complaining about oversized trucks and inadequate fees for highway use. The railroad men present were asked what the maximum permissible truck size should be, and why; and what fees should be levied on large trucks for highway use to eliminate any element of subsidy. Again no specific answers.

Every railroad, most likely, has a couple or more men who could give definite and convincing answers to such questions—and who could defend their answers by citation of objective authorities.

But this isn't enough spokesmen for a railroad to have on these vitally important questions. Getting the right answers to such questions into the minds of influential citizens at the "grass-roots" level is the necessary first step in getting the right answers in statute form.

It is natural and proper that, wherever possible, in public discussion of governmental relations, management should prefer to be represented by its experts who have given deep and thorough study to such complex questions as these—but two or three or even a dozen officers from headquarters cannot possibly be present with adequate ammunition upon all occasions when a convincing and defensible statement of the railroad viewpoint on governmental relations is likely to be called for.

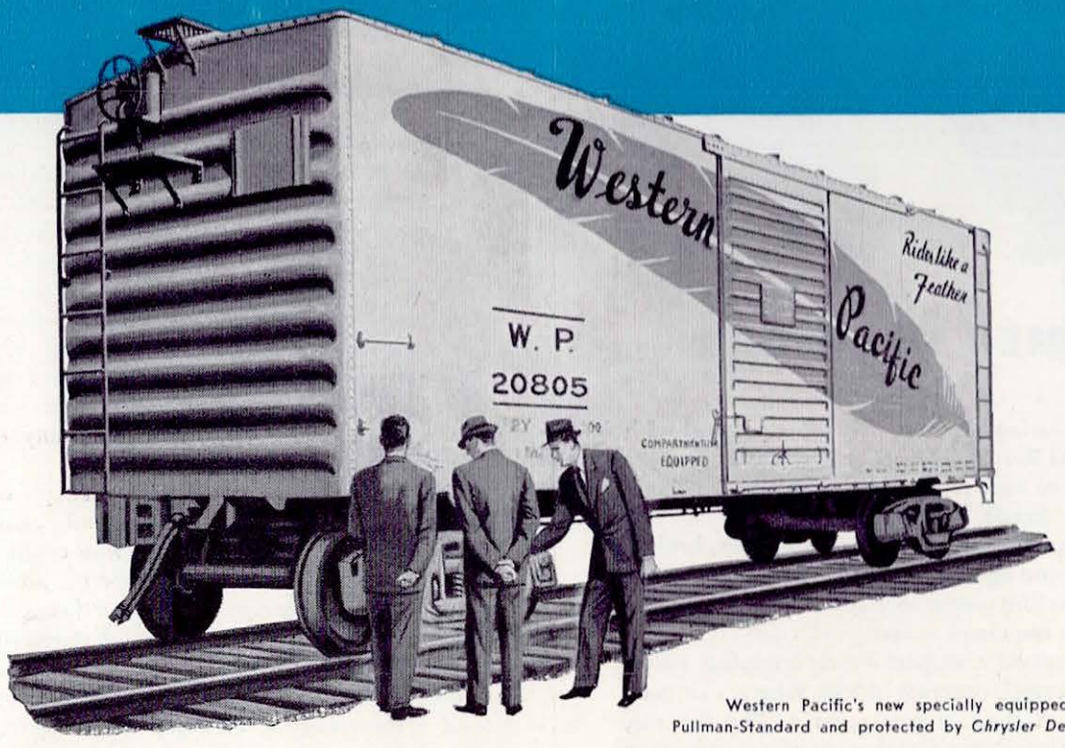
From time to time the railroad view is going to be asked for—when a division superintendent, or a trainmaster, or a division freight agent will be the only railroad representative present. If these officers —indeed officers and supervisors at all levels—are not given adequate information in this sector, the railroad industry is going to be silent scores and hundreds of times when it ought to speak out.

This isn't just top management's fight—but that of everybody in railroad employ. The railroad man who has any talent for leadership, regardless of his job, will sense his need for authoritative and specific information on this subject and will exercise his ingenuity to get it. He will master the essential details; and he will help and encourage his colleagues and subordinates to do likewise.

J. G. L.

Western Pacific Railroad chooses

Chrysler Design



Western Pacific's new specially equipped boxcar – built by Pullman-Standard and protected by *Chrysler Design* Freight Trucks.

Western Pacific is one of the many roads using *Chrysler Design* Trucks. Based on a completely new application of the fundamental principles of Balanced Suspension, these trucks virtually eliminate rail-originated damage to lading.

They absorb both lateral and vertical shocks which could damage goods or equipment, giving full protection to any load even at passenger train speeds.

Maintenance costs are cut; the trucks have demonstrated endurance, dependability and reduced wear in a combined total of over 25,000,000 car miles of accelerated freight and head-end service.

Western Pacific is using its new specially equipped boxcars to provide damage-free transit for fragile first-class lading such as furniture, household appliances, case goods, etc. Use of *Chrysler Design* Trucks on such cars is evidence of the protection afforded by these trucks. They are used by other railroads on head-end refrigerator cars, mail-baggage cars, box-express cars as well as on merchandise, box and many other types of freight cars. They also are standard equipment on the General American-Evans new GAEX-DF cars.

Other users of *Chrysler Design* Freight Trucks are listed across the page. The trucks offer all railroads and all shippers a proven opportunity to increase and improve service, and effect other efficiencies, so important to producer, carrier and consumer.

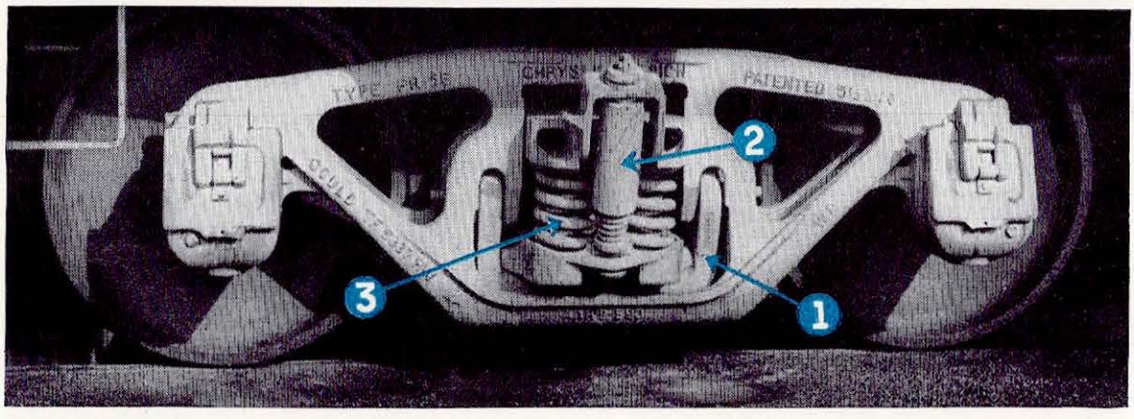
RAILROAD FREIGHT TRUCKS

for new cars that protect all lading better

THE STORY BEHIND THE TRUCK

Walter P. Chrysler, founder of Chrysler Corporation, started as a railroad man and never lost his interest in good railroading. Therefore, when he and his associates established certain new advanced principles of automobile "ride," they sought ways to apply these improved principles to the "ride" of railroad cars.

They aroused the interest of leaders in the railroad industry, and years of research and development followed. The result is the new *Chrysler Design* Truck, one of the really great advances in railroad equipment.



• THIS IS BALANCED SUSPENSION

1 U-shaped swing hanger, with pendulum action, permits truck to move sideways, absorbing lateral shocks before they reach car body and lading. 2 Unique *Chrysler Design* self-contained friction snubber works with 3 the longest travel standard coil springs, to give maximum absorption of vertical shocks and control spring oscillation. No "harmonic bouncing" of car to damage equipment or merchandise. No "free sway" of car body.

• THIS IS WHAT BALANCED SUSPENSION MEANS TO SHIPPERS

Chrysler Design Trucks virtually eliminate road shocks that are potentially damaging to lading. Compared with standard trucks having coil-snubber spring groups, accurately instrumented road tests show 98% reduction in vertical Lading Damage Index and 95% reduction in lateral Lading Damage Index, according to AAR formula. Complete data will be sent on request.

OTHER USERS OF CHRYSLER DESIGN FREIGHT TRUCKS

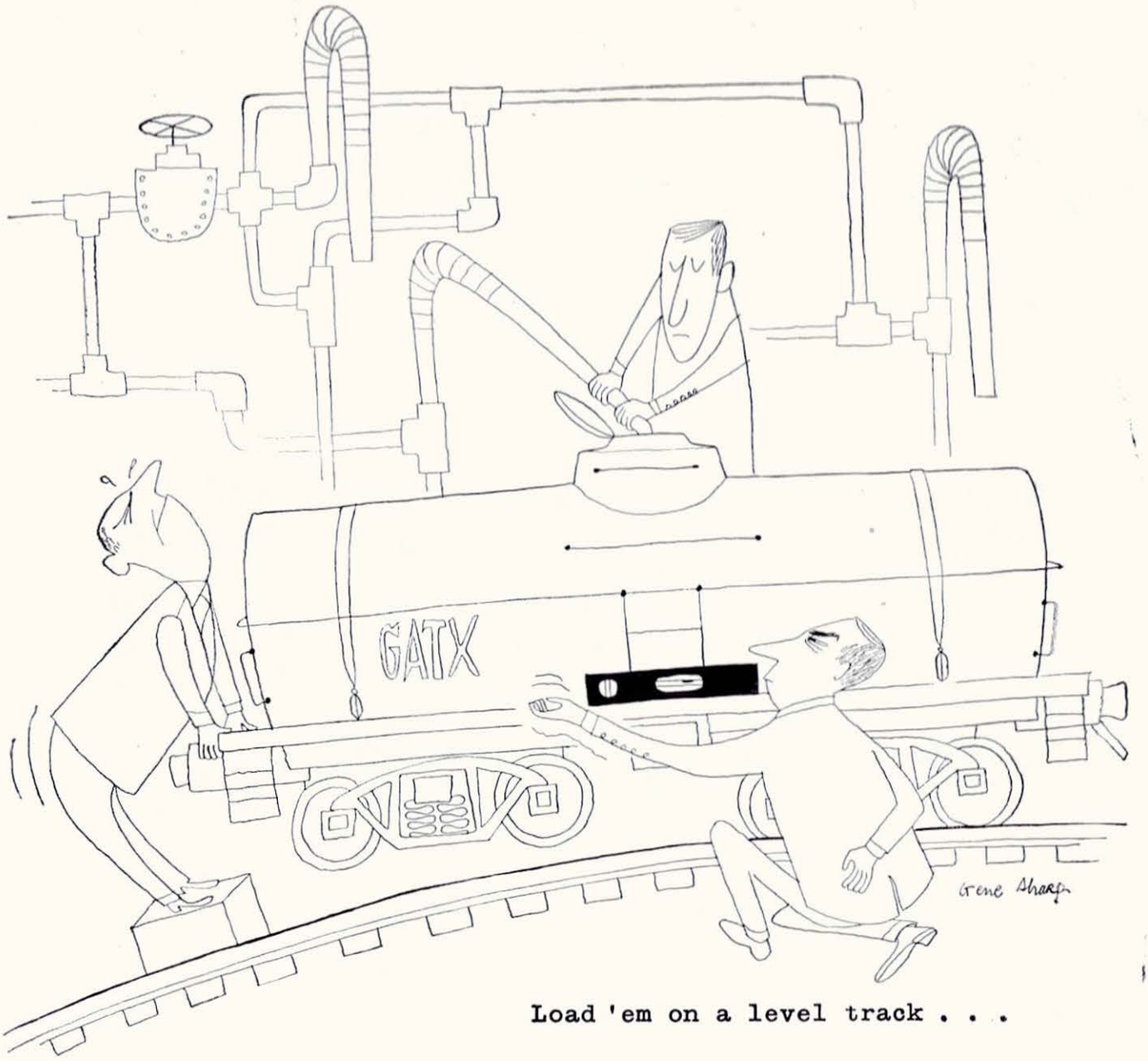
Baltimore & Ohio • Boston & Maine • Chesapeake & Ohio • Chicago, Burlington & Quincy • Delaware, Lackawanna & Western • General American-Evans • Great Northern Lehigh Valley • New York Central • Pennsylvania • Santa Fe • Union Pacific

CHRYSLER CORPORATION

PLYMOUTH DODGE DE SOTO CHRYSLER

Chrysler Design Railroad Freight Car Trucks are manufactured and sold by The Symington-Gould Corporation, Depew, N. Y., under Chrysler license. **Chrysler Design** Friction Snubbers are manufactured and sold under Chrysler license by the Houde Engineering Division of the Houdaille-Hershey Corporation, Buffalo, N. Y.

THE CARE AND NURSING OF TANK CARS



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Another way to get more from your GATX tank cars

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RAILWAY AGE
EDITORIAL COMMENT

MOVING TO CONFISCATE THE LONG ISLAND RAIL ROAD

The proposed plan of the Long Island Transit Authority for acquisition of the Long Island Rail Road—reviewed briefly on page 18 in our August 25 issue—was probably no surprise to anybody. The authority was created by the state government of New York with the express purpose of getting hold of this costly property at a bargain price, and the authority's plan is merely a specific program to put that purpose into effect. Only a local railroad is directly involved here, of course, but the way the questions at issue are resolved will probably establish precedents which might well be controlling in the not unlikely event that other and larger railroads should, at some time or another, find themselves in the same fix that the Long Island now is in.

A Formula for Destruction

The Long Island Rail Road is not, like some electrified passenger lines in urban and suburban areas, an obsolescent transportation facility. On the contrary, it is definitely a going concern, providing an absolutely essential service to a rapidly growing area. Its ability to earn net income was destroyed, not by disappearance of its traffic, but by the state of New York and subordinate local governments, with some help from the federal government, in the following manner:

1. By paralleling all of its routes by a highly developed, tax-free and toll-free highway system—which the people have to pay for whether they use it or not—and against which the railroad has to compete on a basis of attempting to collect full costs of its service from actual users. (The highways have not deprived the railroad of rush-hour traffic at low commutation rates, but they have taken away a lot of high-rated, single-trip traffic; and, of course, they have cut deeply into the road's freight revenues.)

2. By paralleling many of its urban routes with subway lines, operating for a long time at a nickel fare (now a dime), regardless of the fact that this charge falls far short of being compensatory.

3. By requiring the railroad to contribute to, and pay taxes upon, expensive grade crossing elimination projects, which benefit competing highway traffic but not the railroad.

4. By constantly increasing *ad valorem* taxation on the railroad's property—in spite of the fact that rapidly developing competitive facilities by highway yield no tax return whatever toward general governmental expenses.

5. By repressive rate regulation which, over a long period and until comparatively recently, permitted the railroad no increase whatever in its commutation fares despite constantly rising costs.

The federal government assisted in this process of attrition by its niggardly nationwide policy in the regulation of interstate rates, and in its labor policies which have favored excessive exactions by the unions.

The government, then—chiefly the state government of New York in this instance—did just about everything it could to wreck this property, and very largely succeeded. Now, on the basis of a meager earnings record and meager earnings prospects under a continuation of such treatment, the state seeks to get possession of the railroad at a microscopic price, based upon arbitrarily adverse conditions of the state's own creation. It is as if a gang of racketeers should harass a store-owner, breaking his windows and tapping his till until life became a burden to him, and should then magnanimously offer to purchase his business at 10 or 20 cents on the dollar. Legally, the state of New York is doubtless in an unassailable position. Morally, its behavior closely parallels that of some of the gangsters that Governor

Dewey, in his earlier career as public prosecutor, made a name for himself by incarcerating.

The stock of the Long Island, and its bonds also, are owned by the Pennsylvania Railroad and its affiliates—the PRR's total investment in the property being over $100 million. As principal creditor, the Pennsylvania has proposed a plan of reorganization for the Long Island, calling for substantial tax relief, abandonment of "red-ink" lines and services, and freedom from regulatory interference by the state utilities commission as long as earnings are below a prescribed minimum. Under this plan, the Pennsylvania believes the property would earn substantial net income, enabling it to make needed improvements and give satisfactory service while continuing in private ownership. This PRR plan the Transit Authority condemns as "illegal"—finding it abhorrent that a privately owned company should expect to get tax relief or be freed from interference by the state utilities commission while its earnings are substandard.

Tax Exemption Principle Accepted

But what's so awful about tax relief or tax exemption for a privately owned company which performs a socially necessary service and which, plainly, can't afford to pay taxes while competing highway services suffer no such *ad valorem* tax burden? Privately owned schools are not taxed. Housing built to serve an urgent public need is often tax-exempt. When a passenger goes to Long Island in a bus or a private automobile, he pays nothing to cover *ad valorem* taxes on the fixed transportation plant he uses. What's so much different about railroad, as compared to highway, transportation that justifies burdening one with *ad valorem* property taxes, while the other is free from this exaction?

The Transit Authority doesn't, indeed, object to tax-exemption for the Long Island. On the contrary, it is convinced that both tax exemption and freedom from rate regulation by the state utilities commission are necessary. The Transit Authority merely objects to such relief being given to a private company. If, as the authority insists, such relief to a private company would be "illegal," then all New York State needs to do is to change the law.

The authority insists that, if it gets control of this railroad, it will try later on to sell it to a private corporation—but what railroad enjoying tax exemption and freedom from regulation under state ownership could ever hope to find a buyer who would be willing to reassume the tax and regulatory burdens under which, as experience has shown, this property cannot live?

If Governor Dewey and the Long Island Transit Authority really believe in private ownership, then they will establish the conditions under which this property can thrive under such ownership. What they have done, so far, is to protest their affection for private ownership, while insisting on conditions which make such ownership impossible—seeking, meantime, to expropriate the property under the bankruptcy law at a miniscule price they could not hope to get under forthright condemnation proceedings.

THE LAST OF THE FIRST

Electric operation through the Baltimore & Ohio's Howard Street tunnel in Baltimore has been discontinued. Installed in 1895, this was the first main-line electrification in this country.

It is the third electrification to be abandoned in the past few years. Two were primarily tunnel operations in which electrics pulled steam locomotives with their trains through the tunnels. In these applications, diesels are now able to do what steam locomotives could not do safely. The third electrification abandonment involved both tunnels and heavy grades. The original electric locomotives were old and no longer adequate. A new line, which reduced grades and eliminated difficult tunnels, permitted a return to steam operation.

To the uninitiated, it might appear that straight-electric locomotives are going the way of their steam contemporaries. But electric locomotives and multiple-unit cars are the best types of motive power so far devised, insofar as performance is concerned. Power may be distributed over many axles and large overloads may be taken from the power system for short periods. No other form of motive power could replace our major suburban electrifications and this is also true of at least one electrified main line. Another main-line electrification was threatened with obsolescence, but a good power contract, a raise of voltage, minor changes to some locomotives and the purchase of some new ones have reestablished the installation's economic predominance.

It is highly improbable that any railroad will initiate a new electrification in the United States for some time. After all, a diesel is just an electric locomotive with its own prime mover; and can perform nearly as well as an electric. Primarily, two things stand in the way of new electrifications — the large investment required, which must be amortized over a long period of time, and the fact that the electric locomotive cannot run out from under the overhead wire. It is difficult to determine in advance that a new electrification will continue to be adequate until the debt is discharged, and most people whose job it is to make decisions on major policy must be more concerned with the next five or ten years, than the next thirty.

The factor which would reestablish interest in railroad electrification in this country would be continuously rising fuel costs. High cost of fuel has had this result in many other countries, and it can happen here. Meanwhile, the experience gained on installations long in service, and the improved equipment which is constantly being developed will be ready when and if that time shall come.

In double-track territory the rail gang was given full possession of the track on which rail was to be relaid, and traffic moved in both directions over the other main at normal speeds.

On the Milwaukee . . .

New Rail-Laying Practices

How high-speed operation at night and increased output are brought about by use of special equipment and methods

On the Milwaukee, when a rail-laying gang closes up work for the day, the track is turned over to the operating department for full-speed operation at night. Also, there is no appreciable delay in the work when changing from one rail to the other or even when a machine breaks down. These results of improved rail-laying practices, as well as the experimental use of the newly developed Dun-Rite gaging machine, which is manufactured by the Nordberg Manufacturing Company, were recently witnessed during an inspection of a large rail gang working on the Milwaukee near Rondout, Ill.

In nearly all major respects the equipment and organization of this gang conformed to conventional modern practices. Fully mechanized, it consisted of 118 laborers, a rail-crane operator, 2 machine repairmen, a material clerk, a timekeeper, and 3 toolmen, plus 9 supervisory employees.

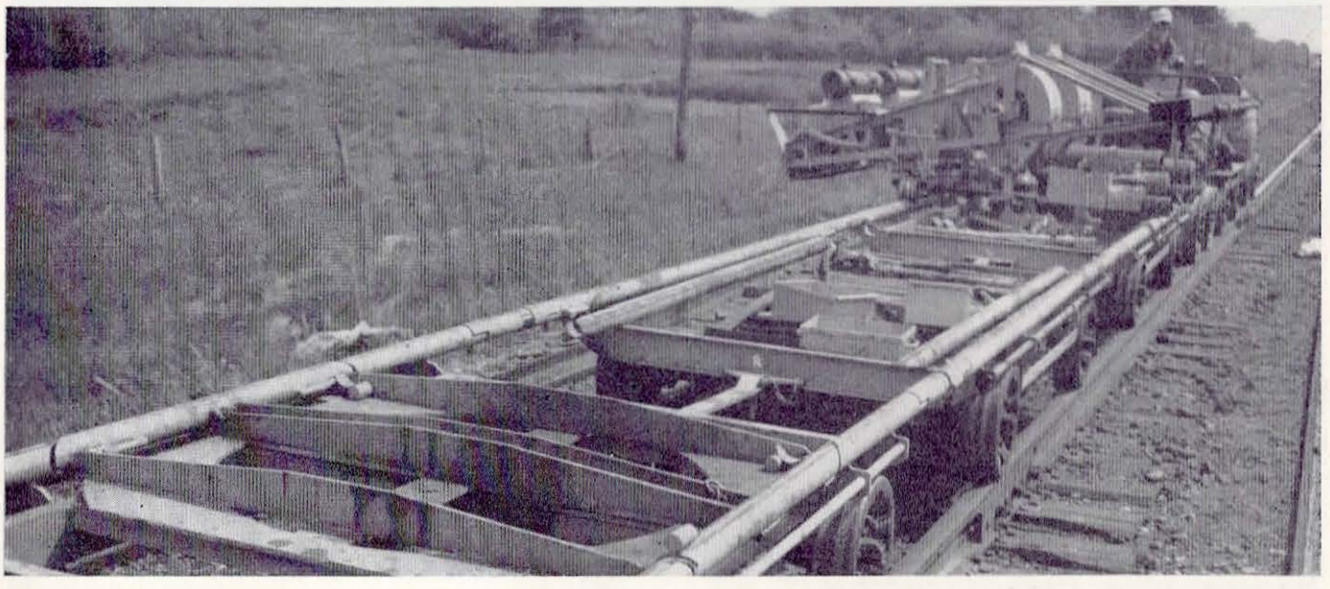
With such a gang, delays occasioned by traffic can be costly, but on the Milwaukee, through the cooperation of the transportation department, traffic is "wrong-mained" in double-track territory for short distances between towns to permit the rail gangs to have full use of the track on which rail is being relaid. Traffic is routed over the other main at normal speeds. Such a practice eliminates the delays that would result from track machines being run to a siding, or set off the track, if traffic were not rerouted.

By way of reciprocation, the maintenance-of-way department incorporated in this gang an outfit for tamping up the former joint ties and any other swinging ties, the purpose being not only to prevent the new rail from being damaged by traffic before the track could be surfaced, but also to leave the track in good condition at the end of the day so that it could be restored to traffic at full operating speeds at night, thus eliminating the slow orders that formerly were necessary. The tamping is done by six men equipped with a four-tool Jackson outfit, following immediately behind the spikers.

Another unusual feature was the provision of a number of standby units of equipment which could be put into service quickly in the event that others might fail in service. The emergency machines included 2 power wrenches, 1 spike puller and 3 spike drivers. Also, in line with standard practice on the Milwaukee, the gang was equipped with a spare rail crane which was held available at the camp for use as needed. The availability of the standby units made it possible to prevent any disorganization or interruption to the progress of the work.

Another innovation was the provision of a turntable whereby the gang was able to turn the track machines

Included in the rail gang was a small Jackson tamping outfit with which all of the old joint ties and other swinging ties were tamped up solidly against the rail. Each night, the track could be used by trains at full speed.



The push car in the foreground has a turntable on which the track machines can be turned for working on the opposite rail. All three cars have pipes along their sides to form a standard-gage track, and have removable pipe ramps on which the track machines can be pushed on and off the cars.

with a minimum loss of time for laying the opposite rail. The turntable was incorporated in an arrangement of three push cars coupled together, over which pipes were laid along the sides of the platforms to form a standard-gage track. Removable pipe sections were available for serving as ramps at both ends of the outfit so that the machines could be pushed on and off the cars. Two of the cars had steel platforms on which tools could be transported, and they were also used frequently for carrying the standby machines. The turntable was mounted on the third car. When turned, the machines retained their relative positions in the gang.

The Dun-Rite gaging machine, with which this rail gang was experimenting, rides on one rail and, by means of a gliding shoe, which is adjustable to the exact width of the base of the rail being laid, brings the previously distributed new tie plates to a line which produces exact track gage between running rails. This machine carries a multiple wood drill, driven by a gasoline engine, for boring holes simultaneously for two anchor spikes, the bits being inserted through the anchor-spike holes.

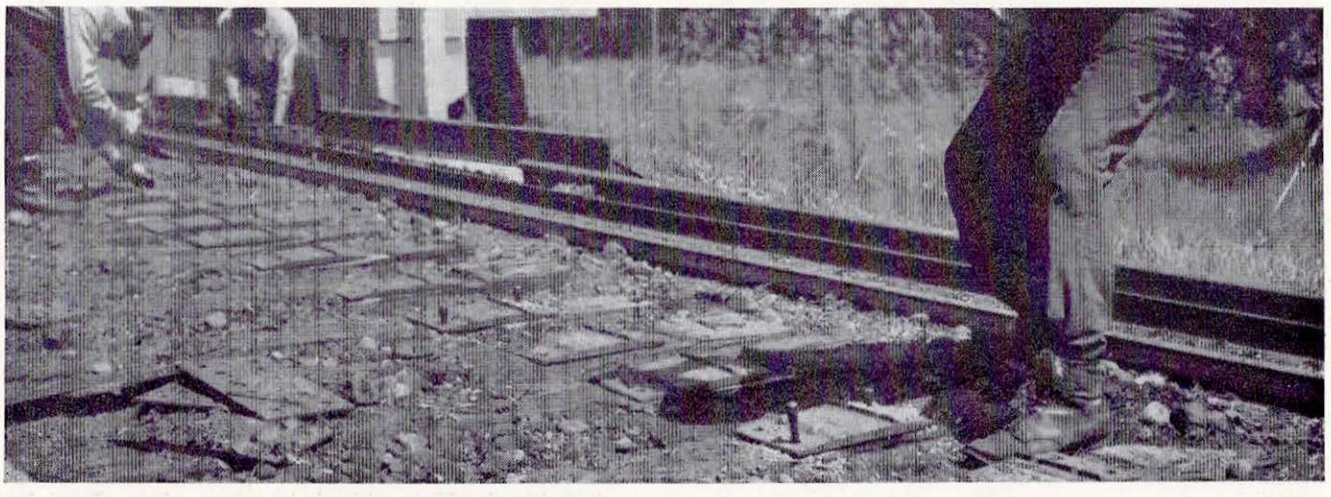
Preliminary tie-plate alinement was first procured by two men with a sliding template. One man pushed the template and the other shoved the plates into line against the side of the template. Two men followed pushing the Dun-Rite machine forward, bringing the tie plates to exact line, while a third man bored the anchor-spike holes in every third tie with the drill carried on the machine. Three men worked behind the gaging machine driving special wood anchor plugs into the drilled holes, thus holding those plates to exact gage. Not only did the use of this machine result in a saving in manpower, but the track gage produced was found to be more uniform than is normally obtained when gaging is done by hand.

A more complete description of the equipment and organization of this gang appears in the September issue of *Railway Engineering and Maintenance.*

Standby track machines are carried along with the gang for emergency service in case of breakdowns on the job. Hence, the gang can continue its work without any redistribution of men and with no appreciable delay.

The Dun-Rite gaging machine was preceded by a template for obtaining preliminary alinement of the new tie plates. Man pushing the template dropped two special anchor wood plugs through the chute at one side at every third tie.

A glider on the gaging machine runs along the rail seats of the tie plates and positions them to produce exact track gage. A multiple drill on the machine bores holes through tie-plate holes for wood spikes at every third tie.



The special anchor plugs, of treated maple, are started in their holes by two men and are then driven home by a third man. These plugs hold the plates firmly in position for new rail to be seated on correct track gage.

One excellent example of the use of air rights above railroad property is the Boston & Maine's North Station, at Boston, which is surmounted by the Boston Garden. This view shows the dual-purpose building—of which the station proper occupies the first two floors—as seen from one of its city-side approaches . . .

What Price Air Rights?

Dieselization, electrification, simplify use of space over railroad property —From 50 to 80 per cent of valuation suggested as reasonable price

It is quite probable that railroad companies have not exploited to the fullest extent the utilization of air rights above their surface properties, E. E. Phipps, general real estate agent of the Baltimore & Ohio, believes.

This conclusion was expressed in an address on "Methods of Determining Fair Values for Air Rights Above Railroad Property," which he delivered before the American Railway Development Association at its most recent annual meeting. Yet, he pointed out, the value of such rights may range from 50 per cent to 80 per cent, or possibly more, of the valuation of the land they overlie.

Mr. Phipps began his talk by defining "air rights" as "the space above a plane of clearance over railroad tracks and facilities, such space being capable of utilization for construction of streets and buildings"; the potential buyer's interest lies "in the space above a specified level that may be occupied by structures."

"The subject," he continued, "is considered a relatively new thing. Actually, it is not. Validity of sales of space has been tested as far back as 1832. [29 Ill. 483; 33 Ill. 175; 43 Ill. 12; and 206 Ill. 534].

"Railroads for years have used the area above tracks for their own improvements. In 1863, full use of air rights was made by the Pennsylvania in construction of the Panhandle tunnel in Pittsburgh. The tunnel, approximately 1,300 ft. long, for double track under Granite hill in the heart of the city, was built for most of its length in an open cut, then back-filled and later on all of the properties above it were sold, the railroad company reserving an easement covering the tunnel structure. As a result, the city extended over the tunnel without interruption and buildings and streets now occupy the surface and air as if no railroad existed.

"When the Baltimore & Ohio in the early 1890's constructed its tunnel between Camden and Mt. Royal Stations in Baltimore, it acquired in many instances fee property, and after construction of the tunnel the surface was sold, the B&O reserving easement for tunnel rights.

"In Philadelphia, the Reading leased to the Philadelphia Inquirer, with privilege of purchase, the fee to land, reserving the right to operate trains under same.

"In New York City, the Pennsylvania sold to the United States government the right to utilize space and air above for erection of a postoffice building. The development following the building of the New York Central passenger terminal in New York introduced in our system of railroad economics the conception of a new value of railroad property. The erection of office buildings, other structures and one of the most elaborate hotels, made such an impression as to be considered the beginning of a new period in utilization of railroad properties.

"One of the most extensive utilizations of air rights is probably the West Side freight line of the NYC in New York City. This line was removed from surface

. . and here is the interior of the "garden," as set up for one of the professional hockey games which are a consistently popular winter evening drawing card for Bostonians and their suburban neighbors. The garden is also used for other athletic events, and for conventions, mass meetings and other large indoor gatherings.

level and elevated. Freight trains run through industrial plants on a viaduct and furnish siding service. You are all familiar with the development around the Cleveland Terminal in Cleveland.

"In Chicago, the central business district was constricted by the railroads which hem it in on four sides. On the north and west, the district is also bounded by the Chicago river. In 1927, this barrier was broken. Marshall Field & Co. and the Chicago Daily News acquired sites, portions of which were surface and the balance air rights; and in the construction of their improvements, the railroads were hidden and large mercantile structures were erected.

"You are familiar, of course, with the sale of subsurface, particularly sales of various seams of coal, resulting in numerous parties owning seams of coal underneath each other, and lease of oil, gas and other mineral rights.

"There is little question," said Mr. Phipps, "that land can be legally divided as between surface, subsurface and supersurface. The theory of ownership of land is that the owner owns from the center of the earth to the heavens. So far as I have been able to learn, there does not seem to be either policy or law against this type of subdivision. In some states, legislatures have passed laws specially authorizing railroads and terminal companies to subdivide to separate levels and to sell or lease same, provided such action does not unreasonably impair use of real estate for railroad purposes. The state of Illinois, through the Illinois Commerce Commission, must approve sales and leases of railroad properties.

"The right to use air rights is created by sale and lease. In each instance there are excepted and reserved from the grant, such permanent and perpetual rights and easements for facilities as may be required by the railroad lying below a horizontal plane drawn at elevation specified.

"It is very evident that no one would be interested in building over a railroad if the cost of creating the ground over the tracks was greater than the cost of free and unencumbered real estate adjoining. In addition, the loss of basement space and the additional cost of providing substitute space, plus the added cost of construction, must be taken into consideration in fixing a value.

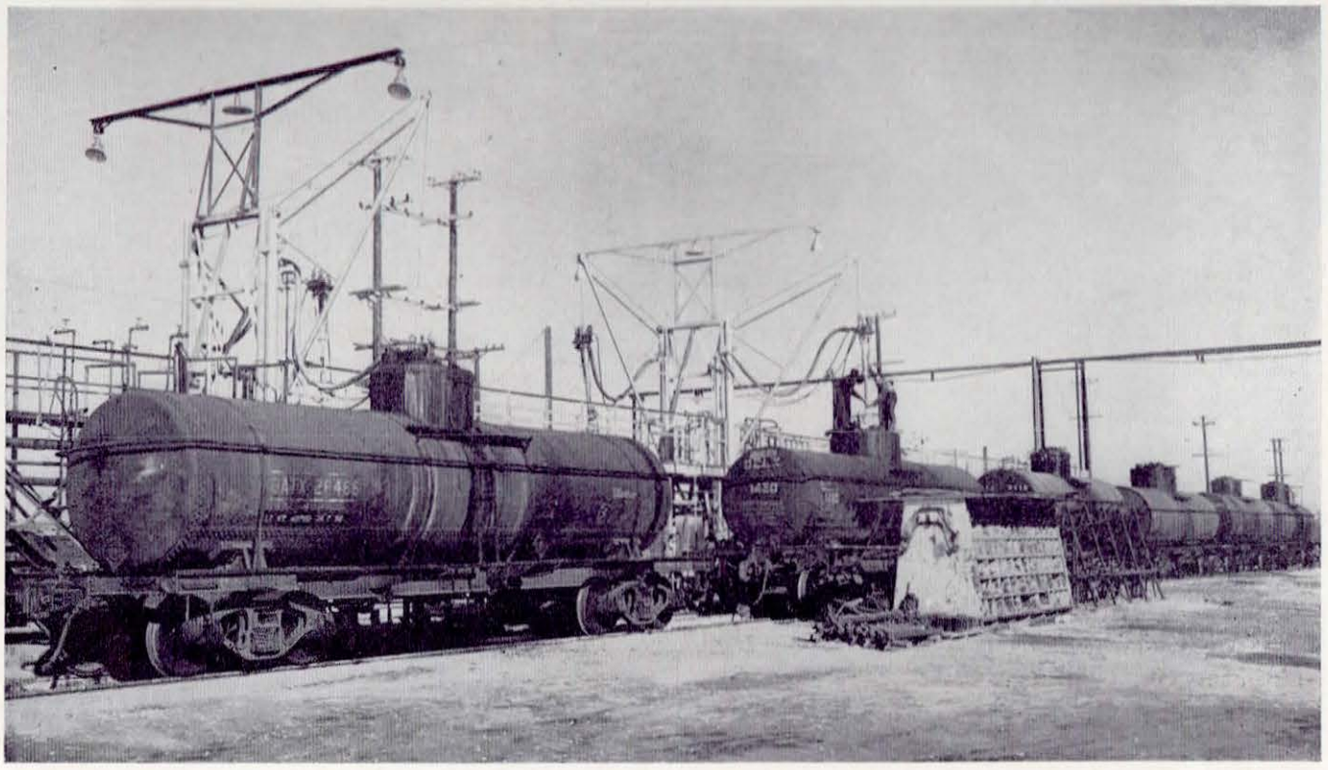
"Air rights possess one general characteristic which enhances their value for commercial purposes, that is, their large areas and the fact they constitute assembled property ready for development. This attribute cannot be stressed too much.

"There is no hard and fast rule in determining the value of air rights. In many instances investigated, the purchaser of air rights also acquired use of surface as well as subsurface locations for supports, etc.

"In certain jurisdiction, taxing authorities have valued the air rights, after the improvement has been erected, as much as 80 per cent of the total valuation of the land. In the negotiating of the sales and leases by various railroad companies and in securing of opinions from other companies, the percentage suggested as applied to air rights has ranged from 50 per cent to 80 per cent of fee valuation."

Mr. Phipps pointed out that the term "air rights" does not include existing surface. "It is utilization of surface over an open cut. This may result in creation of surface at the elevation of adjacent land. In evaluating the value of such right, it is my opinion value of immediately adjacent fast land should be determined, and from that figure should be deducted the cost of creating 'ground' (equivalent to surface), value of lost basement area, and the increased cost, if any, of construction, giving due regard to the fact that the site in question is assembled. This method appears more equitable than endeavoring to fix a set percentage basis.

"In view of the fact that electrification of railroads and employment of diesel equipment make simpler the development of air rights, it is quite probable that railroad companies have not exploited to the fullest extent the utilization of this property right."



Santa Fe tank-cleaning plant at Hobart (Los Angeles), California.

How the Santa Fe Cleans Tank Cars

Modern station at Los Angeles, fully equipped with a washing unit and oil-settling basins, is designed to clean 12 cars a day

One of the most important features of the new Santa Fe car repair yard at Hobart (Los Angeles) Cal., is the tank-car-cleaning station which includes an efficient washing unit and oil-settling-skimming basins with necessary accessories. The settling basins are an innovation in railroad use designed by G. L. Davenport, hydraulic engineer of the Santa Fe Coast Lines. This plant has a capacity to clean internally an average of 12 tank cars a day in one 8-hour shift.

Waste materials which must be removed from the cars before they go back into railway or commercial service include a number of diverse products, with many types of oils predominating. Other materials such as asphalt, varnish, tallow, liquid soap and molasses are encountered. Some products transported by tank car are high priced. Salad oil is a good example. It is necessary for the railroad to clean these cars so thoroughly that no substance will be left to contaminate the next shipment.

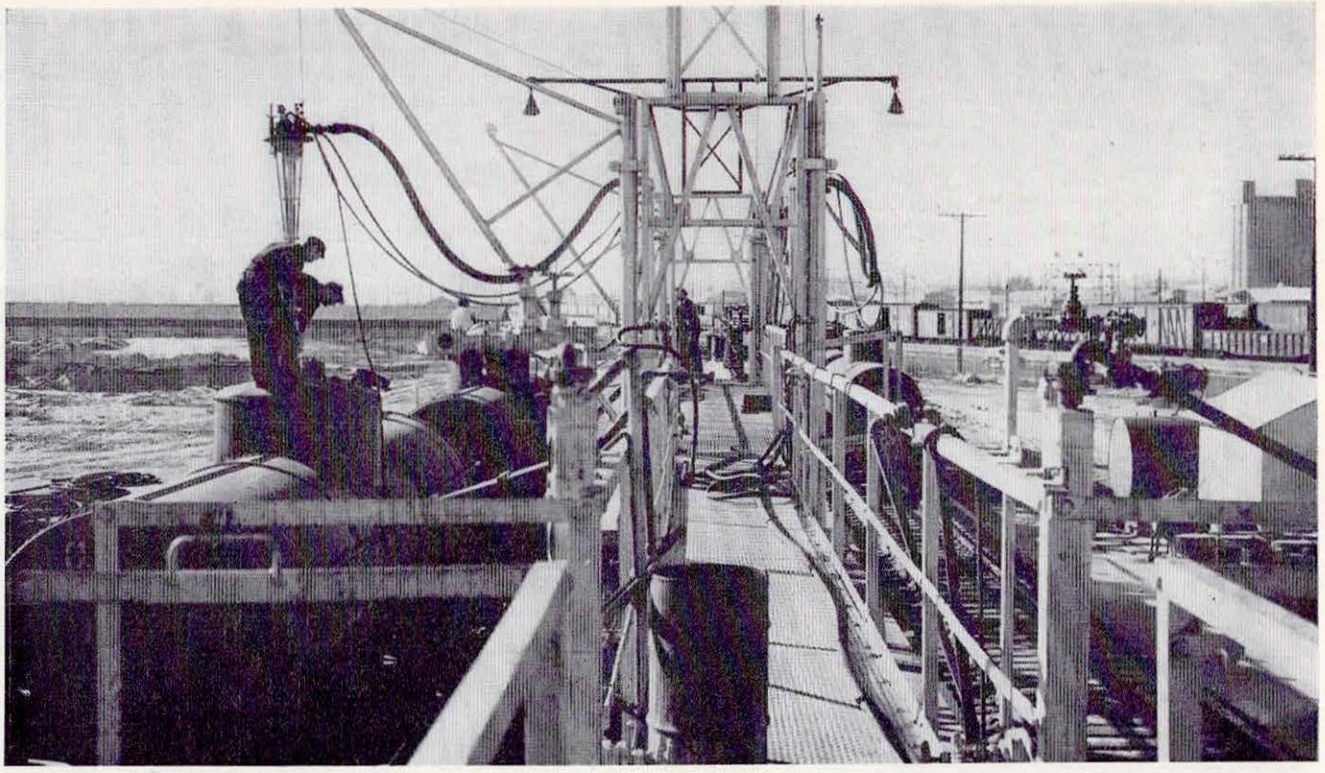
The plant, which consists of 46 ft. of cleaning platform, flanked on each end by 90 ft. of presteaming rack, is located between two spur tracks and has a combined capacity of 15 cars. All of these cars can be handled in one switching operation. They are moved through the cleaning plant by a steel cable operated by a compressed-air hoist having a pull of 2,000 lb.

The cleaning plant proper consists of four Oakite machines, each equipped with a double high-velocity nozzle which is slowly turned in both horizontal and vertical directions by compressed air motors. These machines, supported on swinging cranes, are lowered into the tank car through the manhole.

Heat and Pressure

Four steel tanks, each of 1,500 gal. usable capacity, are located in a concrete pit with tops a little below the ground surface. Two of these tanks contain hot Oakite No. 24 solution and the other two are filled with hot water for rinsing. Two 40-hp. 160-gal. per min. centrifugal pumps, in the concrete pits at each end of the set of four tanks, deliver Oakite solution or hot water at 190 p.s.i. to the rotating jets inside the tank cars by use of hose connections. An overhead steel platform gives easy access to the car domes by vertically swinging bridges. Temperatures of about 200 deg. F. are maintained in both solution and rinse tanks by thermostatically controlled valves.

All cars are given a preliminary rinse with about 1,500 gal. of clean, hot water which is wasted to the drain. About 1,500 gallons of a hot solution of water



Working platform at Hobart tank-cleaning plant gives easy access to car domes.

Cleaning unit with high velocity rotating opposed nozzles ready for lowering into a tank.

containing Oakite No. 24 detergent (strongly alkaline) is then applied at a pressure of about 190 p.s.i. to the interior of the car through the rotating nozzles. This solution is recirculated through the tank car back to the stationary tank. After using the solution for an estimated four to ten cars, depending on how much cleaning is needed, it is wasted to the drain. A final rinse of about 500 gal. of cold water is then applied and wasted to the drain, completing the operation.

Air at reduced pressure is used to force cleaning solution and rinse water out of the tank cars, both to reduce the draining time materially and keep as much as pos-

sible of the interior surface available for direct impact of the high velocity jets. It is then possible to inspect the car interior and apply such hand cleaning as may be necessary in particular cases.

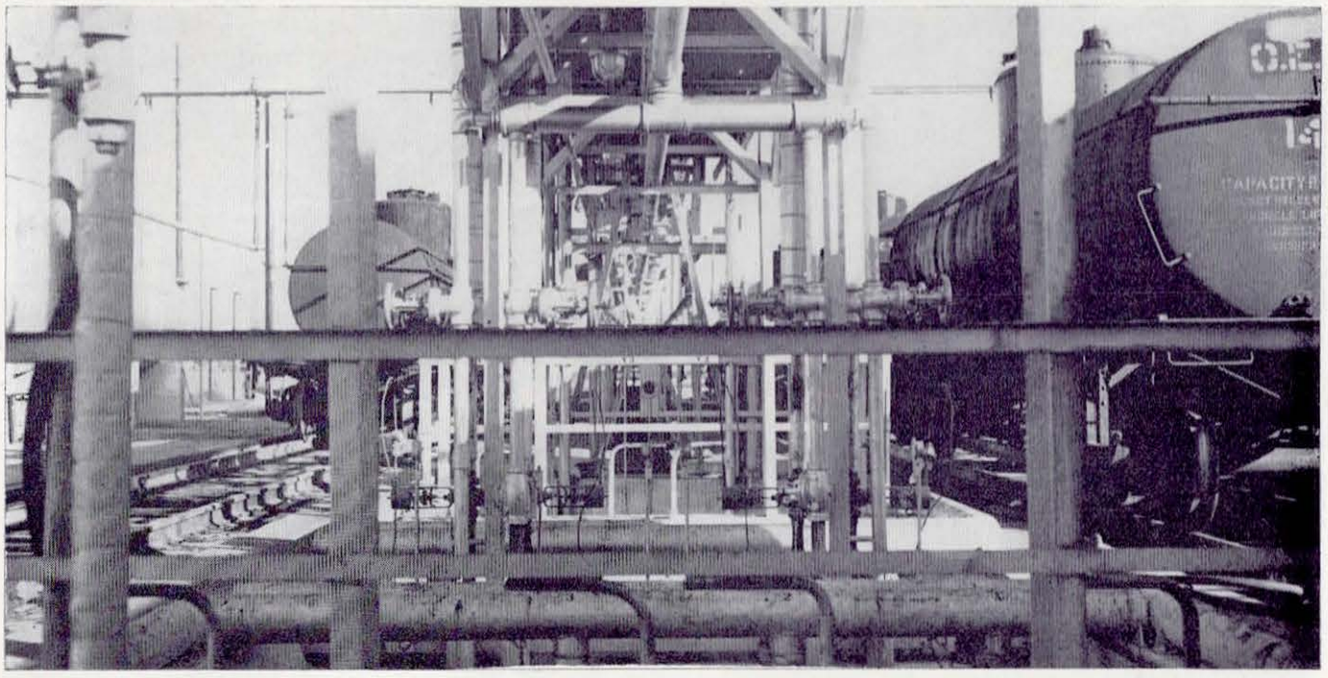
Some cars which have been loaded with heavy oils and asphalts require as much as 48 hours of presteaming before the cleaning jets are used. The time required for cleaning and rinsing after steaming varies considerably with the substance removed, but the average is ¾ hour.

As some tank cars have contained combustible liquids such as gasoline or other light oils, explosion-proof electrical equipment is used throughout the plant.

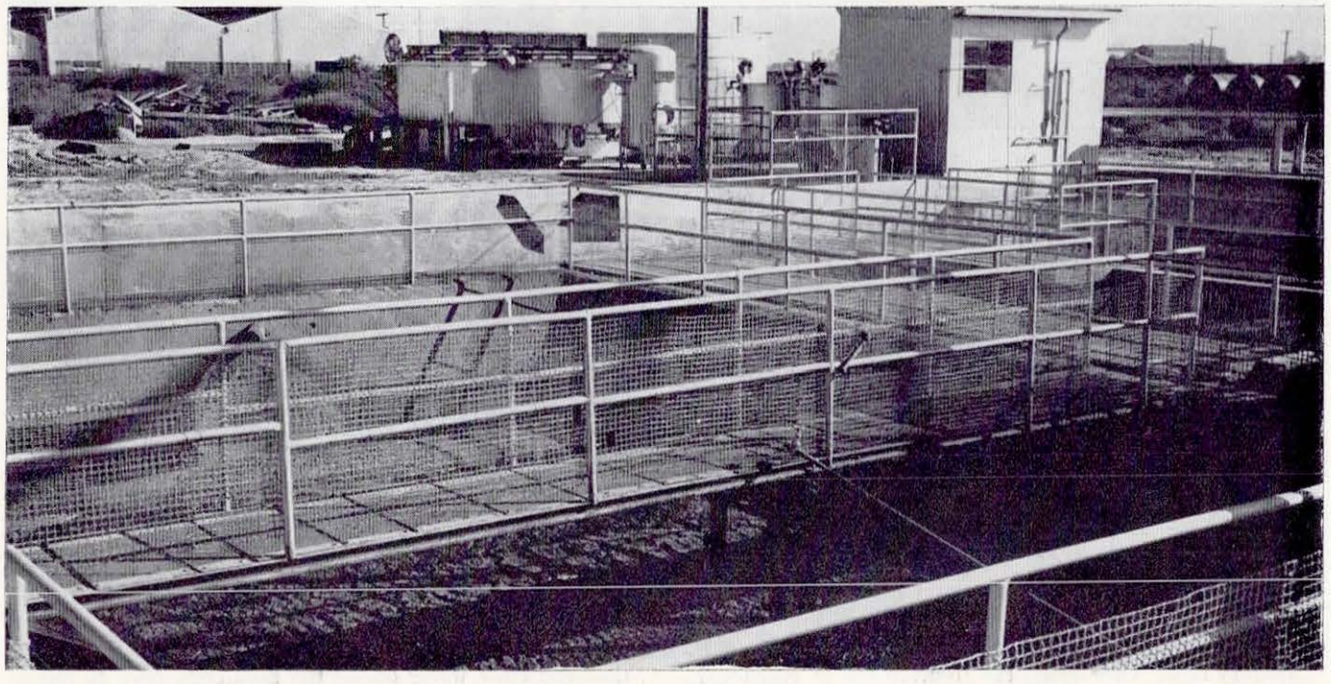
A 30-ft. by 60-ft. steel building, about 400 ft. from the cleaning plant, houses a 150-lb., 150-hp. boiler, and a 294-cu. ft. per min. air compressor driven by a 75-hp. electric motor. Boiler feed water is Zeolite-treated to remove hardness.

Pump and Air Compressor

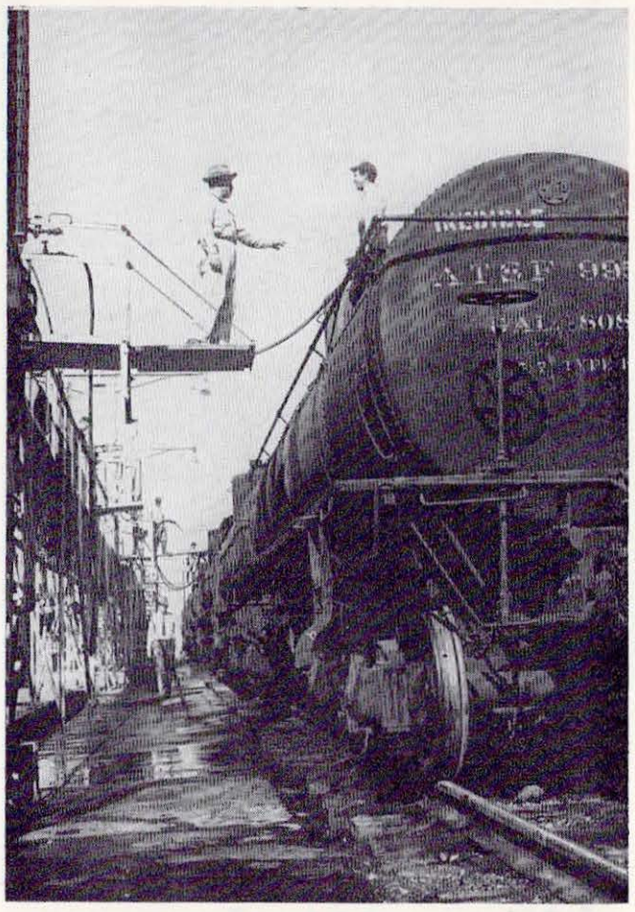
The air compressor is a Worthington machine purchased in 1917 for an air-lift water-supply plant which has only recently been abandoned. It operates automatically with pressure control and is cooled by recirculated Zeolite water.



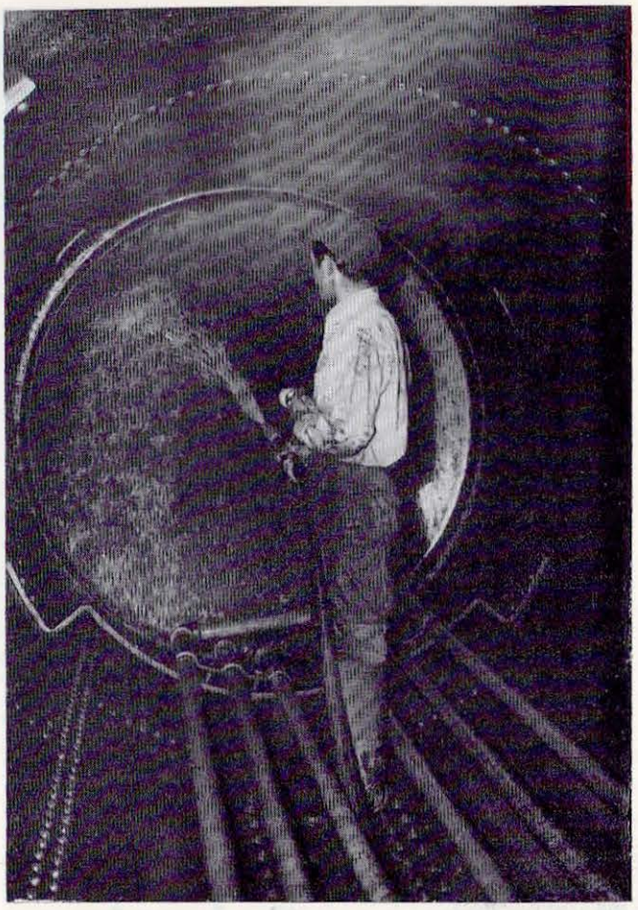
The platform supporting structure, underground tanks and controls.



Waste-water settling and sludge basins at the Hobart tank-cleaning plant.



Hinged platform extensions give easy access to the domes.



Using a water spray for the final rinsing and inspection.

A service pump rehandles water from an existing 24-ft. by 45-ft. high supply tank, boosting it to 70 to 90 lb. pressure at a rate of 250 gal. per min. and supplying it to the cleaning plant as required through a hydropneumatic tank of 5,000-gal. capacity. Water for cold rinse is stored at the car cleaning plant in a 10,000-gal. above-ground tank so that it may be directly available to the centrifugal pump supplying the Oakite jet-cleaning machines. Supply to this tank is protected from contamination by an air gap.

Waste Water Treatment

Stringent requirements of Los Angeles county pollution control authorities have made it necessary to construct a rather elaborate treatment plant for removal of oil and other objectionable substances from the waste water discharged by the tank-car cleaning plant.

At the cleaning plant, there is an open concrete trench leading to a grit chamber 15 ft. long where heavy solids are settled out; then the effluent passes through a bar screen and through 460 ft. of 10-in. steel pipe to the intake of the treating plant. After passing through a 17,000-gal. double-compartment concrete-lined basin where more solids are settled out and free oil is skimmed off, the effluent passes into a double-compartment storage chamber of 14,000 gal. capacity, from which a duplicate set of 10-hp. vertical sump pumps take suction. These pumps have a capacity of 250 gal. per min. at 80-ft. head and discharge into a "Colloidaire" treating tank and automatic skimming unit, manufactured by the Bulkley-Dunton Pulp Company.

Compressed air, reduced to 35 lb. pressure, is fed into the base of an automatic throttling valve on the pump discharge while coagulating chemicals, alum, sodium silicate and ammonium sulphate, are introduced into the pump suction with automatically controlled proportioning feed.

The effluent is suddenly relieved of pressure on entering the skimming tank and the entrained air rises to the surface in millions of minute bubbles. In combination with the coagulating chemicals, these upward moving air bubbles trap oil and other foreign particles, carrying them to the surface where a mat of foam or scum is formed. This scum is continuously removed by automatic flight skimming boards and flows by gravity to a sludge storage basin. Later it is removed by vacuum trucks for final disposal at an approved dumping ground. The clarified effluent is discharged into the county sanitary sewer system, ultimately reaching the ocean.

"Rain Valve" Diverts Effluent

Since the county objects to discharge of rain water into its sewer system, a "rain valve" has been installed which automatically diverts the untreated effluent to a storm sewer leading to the Los Angeles river whenever the rainfall exceeds a predetermined rate, fixed tentatively at 0.1 in. per hour. Ordinarily discharge to the river of any waste water containing more than a trace of oil is prohibited, but for short periods when the river carries an appreciable quantity of water, this method of waste disposal is considered by county authorities to be preferable to overloading the sewers with rain water.

All prospective employees are interviewed by trained personnel men before an applicant is recommended for any position. The job seeker also must get acceptable grades on certain tests.

In Canada . . .

Employee Selection Stabilizes Work Force and Cuts Training Costs

Increasing emphasis put on training programs designed to fit men for promotion and give railways a supply of future supervisors

The management of the Canadian railways, like those in the United States, are faced with the necessity of improving their service so they can continue to compete with other forms of transportation, all the while keeping their financial "heads above water." To produce good transportation railroad managers need good tools and capable men and women to handle the tools. To the best of their financial ability railway managements are providing their employees with the tools. They are finding, however, that the procurement of competent operators for those tools is, in many ways, a more complex and difficult procedure. Increasingly, over the last few years, this job has been turned over to the personnel departments of the two principal Canadian railways.

Canada's railways must compete with the country's other industries for a labor supply which, at best, is not too abundant. Furthermore, even if it were available, the addition of personnel to the payroll would not in itself assure the railroads that they could do a better job with no increase in the unit cost of producing transportation. All factors considered, therefore, the roads have been forced to pursue three courses of action to be sure that their manpower supply — quantitatively and qualitatively— is sufficient to enable them to do the necessary transportation job, viz.

1. Put the right man—or woman—in the right job;
2. Eliminate labor turnover;
3. Educate employees so they will have the best possible chance for advancement and also be efficient representatives of the railways.

Both of Canada's major roads have set up employment offices in the larger population centers, such as Montreal, Toronto, Winnipeg and Edmonton. Others will be opened soon. At these offices job applicants are interviewed for suitability, and files are kept of possible employees in the various categories of employment, in case there is no hiring to be done at the time of the application. In addition, the Canadian National, for example, has all its prospective employees take intelligence, mechanical aptitude, or other tests, depending on the type of position the prospective employee seeks to enter.

A person who applies for a job as a clerk, for example,

first would take the intelligence test. Following this, he would take an educational test for clerical workers, to determine his ability to perform clerical work satisfactorily. Then the applicant may be asked to take two more tests which check on ability to perform certain types of clerical work and to use the mind for clerical processes. By this means the CNR management believes it can establish fairly definitely the fitness of persons for certain job categories.

Prospective employees also are given an interview by experienced employment counselors in which the interviewer attempts to find out something about the applicant's attitudes, interests, hobbies, likes and dislikes, family background, his ability to cooperate with others and the degree to which he is aggressive and self-reliant. At the same time the employee is told something of the company, the privileges and responsibilities that will be his in his chosen job, as well as the opportunities for promotion. If the applicant is adjudged suitable for a position he then goes to the chief clerk or head of the department concerned, who will do the actual hiring, provided he also thinks the person will fill the bill. Once the person is hired the personnel department keeps track of the new employee to see how he is doing.

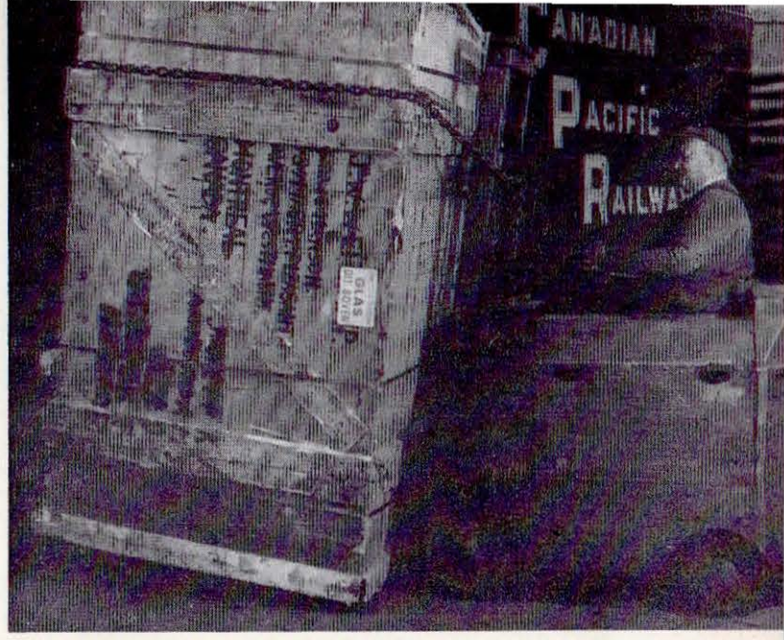
Two factors enter into the personnel department's recommendation that a person be hired for any particular type of job: the degree of intelligence the applicant possesses; and the intelligence required for the job in question. In some employment categories chances for advancement are limited and a person of very high intelligence who got "in a rut" very likely would quit upon finding himself stymied, or he might become a trouble maker. In either case the loss to the railway would be great, so such persons are not hired for the jobs they request and are told quite frankly why this is true. If possible, they are hired for another more suitable position, either at that time or later.

By trying to get the right person in the right job, the CNR feels that it creates employee satisfaction, which tends to eliminate labor turnover. At the same time the railway is reasonably sure that it has an employee who will be up to the job he is holding. Thus as a stabilized, reasonably well satisfied work force is provided over the whole Canadian National system, service should improve. Naturally enough, it will follow that through reducing the number of employees who must be trained to fill their jobs, some economy, much of it intangible, will accrue to the railway.

The Canadian Pacific also runs a number of employment offices and tests its employees in a similar manner. The CPR management feels to a great extent that it has achieved many of the same good results. Employees are hired on a probationary basis, and for the great majority the period is six months, although, due to some labor agreements, the period may be shorter. Either party, at any time before the end of the probation, may terminate the employment. Assuming that the probationer likes his job and stays for six months, he is interviewed by various superiors at the end of his first, third and fifth month on the job.

Supervisors Are Satisfied

Where the trial period is shorter, interviews are on different schedules, but each employee is appraised three times by supervisors. At those times he is rated as to interest in work, industry, accuracy, attitude toward instruction, availability and punctuality for duty, relations with fellow employees, attitude toward the public, and appearance. If the probationer is judged unfit, he is dropped from the company's rolls but nothing is entered on his service record which would be detrimental to his chances to gain employment elsewhere. At the same time the railroad is not faced with the necessity of placing the man on the seniority roster while he is in the probationary period.



Personnel selection at all job levels helps to reduce labor turnover. This is a boon to the men as well as the railway.

This system the CPR feels has worked out very well. At first there was some doubt on the part of supervisors that the program would be successful. Furthermore, there was some thought that it would be too time-consuming. After the plan had been in effect a year supervisors were questioned at length about it by the personnel department, and 90 per cent of them said that their fears had not been realized, and that they thought the program was working out well. It has been continued and is still going well. The personnel department administers the plan and an officer of the department examines each report made on the probationary employee. In this way the railway is reasonably assured that a potentially good employee will not be lost in the event that a supervisor makes the obvious mistake of rating the probationer as above average in interest in his work and then saying on the same report that regards industry "he won't work without supervision."

Recently the CPR personnel department fostered a series of cooperative conferences, on a divisional basis, whose object is to improve the railway's service to the public. The first series of conferences was devoted largely to matters of passenger service, but not confined to it. In future conferences it is expected that every point where railway service touches the patron will be scrutinized by the divisional representatives of the railway brotherhoods and the different railway departments.

Suggestion systems and personal guidance are some of the other things the personnel departments of the two major Canadian railways get into. In addition, realizing that nothing tends to reduce employee turnover quicker than good working conditions, the personnel departments of the two roads keep a sharp lookout for —and are not hesitant in pointing out to the proper authorities—such conditions as unsatisfactory eating or bunkhouse facilities at shops or terminals, so that these situations may be corrected. The idea behind this practice is simply that if the employee is convinced that the management of the company is interested in his welfare then the worker will tend to think that he should have some interest in the company.

Local newspapers almost always cooperate wholeheartedly. This photograph was staged by a photographer for a Philadelphia newspaper to help dramatize the B&O program for increased highway crossing safety.

Observers stationed at selected crossings for two- or three-hour periods of greatest highway traffic density record the license numbers of automobiles crossing. At some points four or five crossings might be observed at one time by several crews.

The cover of the crossing safety reminder which is mailed to the registered owners of all cars observed violating traffic or safety rules at grade crossings.

Educating Drivers To Reduce Crossing Accidents

How the B&O is expanding its highway grade crossing safety program

A gradual reduction in the number of highway grade crossing accidents on the Baltimore & Ohio is the tangible result of an intensive program of railroad and driver education. The program has recently been expanded and intensified by conducting local meetings and crossing observations more frequently and at more localities throughout the system.

Grade crossing accidents, in addition to the toll of life and limb that follow in their wake, have a bad effect on public good will, to say nothing of being expensive to every railroad—even though the railroad itself may not be at fault. With over 6,500 principal highway grade crossings on its 6,200-mile system, President R. B. White has long felt that the B&O would gain both directly and indirectly from a program of driver education—conducted at the local community level—aimed at reducing the number of grade crossing accidents.

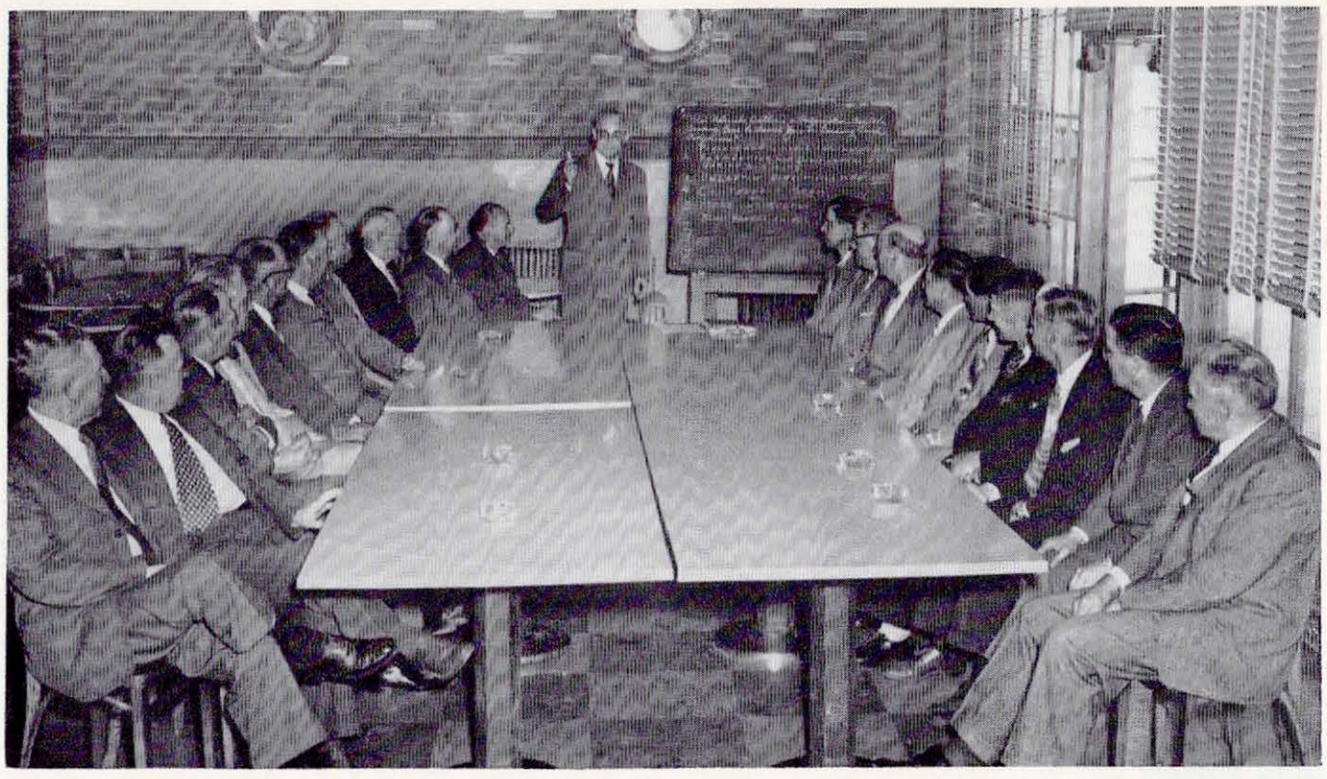
A survey of highway crossing accidents, made before the accelerated program was started, showed that over 90 per cent of grade crossing accidents involve people living near the crossing—people who have become so familiar with the surroundings as to become careless. Also, as is well known, about one-third of these accidents are the result of people driving into the side of a train. These accidents are caused mostly by driver carelessness, and, therefore, are preventable.

The program—of which the crossing observation illustrated here is but a part—is conducted almost entirely at the local community level. Division superintendents and safety supervisors invite local government officials, chiefs of police, chamber of commerce officers, Parent-Teacher Association leaders, and key members of the local Kiwanis, Rotary and Lions Club organizations to luncheon meetings at which the program is described and their cooperation and assistance solicited. Talks illustrated by sound motion pictures are shown at these meetings and in local schools by uniformed members of the railroad police department assigned to this work.

The theme of careful driving at railroad crossings is put across by constant repetition, using all modern methods of education and communication: advertising, illustrated newspaper stories, radio programs, speeches, motion pictures, and the program of crossing observations illustrated here.

Recognizing that there is work to be done on the railroad too, the B&O instructs and constantly reminds its engine and train crews of their duties and responsibilities with respect to grade crossings. Supervisors are required personally to inspect and report on the physical condition of all grade crossings in their territory, including such elements as the condition of the crossing, the proper placement of warning signs, visibility, and automatic warning devices. By this inspection program, the B&O endeavors to keep its crossings in the safest possible condition at all times.

This crossing safety program was initiated by the B&O and conducted in a limited way for two years to test its effectiveness. This proved, the intensity of the program has been stepped up, and its coverage improved by means of local campaigns conducted on a scheduled basis.



Superintendent J. J. Jordan and his staff on the Southern Pacific's Coast division participated in the railroad's new course in conference leading. Like F. G. Clisham, chief clerk to the superintendent, who appears at the blackboard, all participants get professional instruction and practice in leading discussions.

To Improve Communications . . .

The SP Trains Its Men

. . . In Conference Leadership

As a new and important step in its efforts to improve communications in both directions between management and employees, the Southern Pacific has inaugurated a training course in conference leadership for division superintendents and their official staffs. The program will later be extended to superintendents of motive power and their staffs at the company's general shops.

Its primary purpose is to train division officers and principal supervisors as capable conference leaders, so that a better interchange of ideas and information can be accomplished in the meetings they hold with employee groups. However, the program has a number of other significant objectives, including:

1. To help develop leadership ability among those taking the course;
2. To improve their ability and effectiveness as trainers;
3. To encourage them to get the benefit of group thinking in the solution of various problems;
4. To provide them with a means of making employee meetings more attractive and productive, by giving employees a chance to participate, make suggestions and express opinions; and
5. To bring about higher morale of the employees.

Since 1945, when the SP pioneered its current program of human relations training conferences, officers have been impressed with the advantages of the conference method over the lecture method, for certain training purposes. The principal feature of the conference method is that it is based on audience participation in developing ideas or reaching agreement. This participation by all those attending a meeting results in a degree of interest and understanding considerably above what can ordinarily be accomplished by the usual lecture procedure.

It is now felt that the same conference procedure will be valuable in meetings of many kinds on the divisions, both at supervisory levels and, particularly, in employee meetings on such subjects as safety, prevention of loss and damage, or improved personal service to the public. A knowledge of how to lead conferences is expected to be a valuable tool in the hands of the company's officers and principal supervisors in the operating department.

The practical value of similar training has already been proved in the SP's accounting department at San Francisco headquarters. Chief clerks who took a con-

ference leadership course three years ago have since been using conference meetings to solve many of their supervisory and personnel problems.

The railroad's human relations training conferences over the past seven years have been conducted by outside specialists, members of the staff of Hobson Ferguson & Associates, industrial trainers. The Ferguson organization is now conducting the courses in conference leadership.

Officers and principal supervisors on each division, meeting in groups of 20, receive 25 hours of training. This is ordinarily scheduled over a five-week period, with a five-hour meeting one day each week. To date, training has been completed on the Western and Coast divisions, and on the Northwestern Pacific, one of the SP's wholly owned affiliates; and courses are now under way on the Salt Lake and Sacramento divisions of the SP. A survey of "graduates" of the course indicates they consider it the most popular type of formal training they have yet received, and that many are already putting it to practical use.

The following positions are included in the training on each division: Superintendent, assistant superintendent, trainmasters, assistant trainmasters, terminal superintendent, assistant terminal superintendent, terminal trainmaster, road foreman of engines, assistant road foreman of engines, enginemen instructors, chief train dispatcher, chief clerk to superintendent, station supervisor, general yardmasters, division special agent, division engineer, assistant division engineers, roadmasters, bridge and buildings supervisor, signal supervisor, water and fuel supervisor, division electrician, master mechanic, assistant master mechanic, master car repairer, assistant master car repairer, general foremen motive power and car department, and station agents at large terminals.

The conference training is under direction of K. C. Ingram, assistant to president, and Stanley T. Moore, training supervisor, as part of the railroad's employee relations program, but is closely coordinated, through J. W. Corbett, vice-president in charge of operations, with the operating department's training and development program for officers and supervisors.

New Books . . .

THE WESTERN MARYLAND RAILWAY STORY—A Chronicle of the First Century—1852-1952. By Harold A. Williams, with introduction by Eugene S. Williams; contemporary photographs by A. Aubrey Bodine; other illustrations, and end paper maps. 134 pages, 10 in. by 7¼ in., bound in cloth. Published for the Western Maryland by Schneidereith & Sons, Baltimore, Md.

First impressions usually mean a lot; one's first impression of this book is so highly favorable that there is a strong temptation to put it almost in a class by itself so far as railroad histories are concerned. It is beautifully bound and superbly printed, on excellent paper, with just enough touches of color to tone up the pages of solid text. The historical photographs are well above the average of their type; and Mr. Bodine's contemporary pictures, with which the book is liberally illustrated, are, without exaggeration, equal to anything in the annals of railroad photography in their clarity and their composition. Many of them have, wisely, been reproduced in full page size.

What is perhaps more to the point, that favorable first impression stands up upon reading the book. In just a little over 100 pages of actual text—the rest being devoted to pictures—the author has apparently told everything most people would want to know about the Western Maryland's first century of corporate life. He has done it by organizing his material with care; and by eliminating extraneous and frequently confusing detail. Novel phases of the story are a chapter devoted to President Lincoln's trip to Gettysburg over a predecessor line of the WM, and another to the Blue Ridge Mountain resorts which for a time made the railroad a major passenger carrier.

Publication of the book was undertaken to mark the Western Maryland's centennial—May 27, 1952—the subject of an extended article in *Railway Age* of May 12, page 53. It is not the first history of the railroad to be printed; its earlier years were covered in a thesis written by the late Professor William Burton Sanders, and another was more recently written by Edward M. Killough, now valuation engineer of the WM. This present work draws heavily upon material contained in both these predecessors, but it goes on to bring them up to date, and completes the story of the railroad's first hundred years.

SOUTHERN PACIFIC, by Neill C. Wilson and Frank J. Taylor, 9 in. by 6 in., 256 pages. Bound in cloth. Illustrated with photographs. Published by McGraw-Hill Book Company, 330 West 42nd st., New York 36. Price $4.50.

As its subtitle—"The Roaring Story of a Fighting Railroad"—implies, this work is aimed at the "popular" market wherein readers enjoy maximum action on every page. Yet despite its breezy, fast-paced style, there is much to commend this book to more serious students of railroad—and Southern Pacific—history.

In their preparation, the authors had access (in addition to the more usual reference sources) to numerous private manuscripts and letters of early officers of the company. It is from these papers that the book gets its best (and most authentic) flavor. Numerous direct quotations from the personal correspondence of C. P. Huntington and other SP officers and men of his day not only convey the spirit of railroading in those times, but also reveal the character of the leaders themselves. The early days of "Express Train" travel across the continent in Pullman and Silver Palace cars at the "rocky" pace of 20 m.p.h., with notes from travel guides, employees' regulations and reminiscences of old employees, are depicted in a manner rich with "little" things that make the book well worthwhile.

But once the authors have portrayed the "roaring" aspects of the 60's, the 70's and the 80's, they jump rather abruptly into the era of streamliners, diesel power, C.T.C. and wartime traffic records. Largely omitted are the "middle" years of the company's growth in both the text and accompanying illustrative material. Even the 13-page chronological appendix entitled "Mileposts" skims over these years rather lightly. Because of its preoccupation with the frontier years and the present day, this book cannot be considered as a "definitive" record of Southern Pacific accomplishment.

Despite these shortcomings, however, the authors have done an excellent job in recreating the personal experiences of employees and passengers of the era they have chosen to portray. Because "Southern Pacific" is fast, entertaining reading with a good groundwork of basic historical fact, it will undoubtedly satisfy a wide range of reader tastes—and in so doing, bring the story of this key railroad system to a far greater segment of the general public than could a more precise and scholarly treatise.

Certainly, for the railroader it is enjoyable reading.

FINANCIAL

Delaware, Lackawanna & Western.—*Seeks Two Seats on Nickel Plate Board.*—The DL&W has filed with the I.C.C. a dual document, the first portion of which seeks commission approval, to the extent necessary under Section 5 of the Interstate Commerce Act, for election, by cumulative voting of the Lackawanna's holdings of New York, Chicago & St. Louis common stock, of two directors to the Nickel Plate's board of directors. The second portion contends that commission approval is not necessary because election of the two directors will not constitute control of the Nickel Plate by the Lackawanna, and asks dismissal of the application. The Lackawanna wants to be represented on the Nickel Plate board by two directors who are not officers or directors of the Lackawanna, and thus does not propose interlocking directorships. The Lackawanna bought its Nickel Plate stock—330,000 common shares, which is 14.8 per cent of stock having voting rights—in 1947 and 1948 (*Railway Age*, May 26, page 60).

Lines of the Nickel Plate and the Lackawanna meet at Buffalo, N.Y. They are, the Lackawanna said, "not competitive but complementary." The proposed transaction would "supplement" present interchange arrangements, and the two carriers "would be placed in a stronger competitive position vis-a-vis the other carriers serving the New York-Chicago and St. Louis area." The Lackawanna and Nickel Plate are the "only two carriers serving the area by a continuous line of railroad not under a single ownership," it added.

One example of possible savings cited by the Lackawanna, would be a common freight terminal in Buffalo. Such a terminal, costing an estimated $8,500,000, would save the roads up to $1,087,817 annually—a 12 per cent return on investment. These estimates of savings are based on a joint study the two roads made in 1948.

Additional economies and improvements in service would result, the Lackawanna said, from combining the work of various departments of the two railroads. One study indicates that $500,000 a year could be saved by combining parts of revenue and disbursement accounting, car accounting and freight claims departments.

Service would be improved because a joint Buffalo terminal would cut an hour and a half off through freight traffic, the Lackawanna said. The present "competitive disadvantage" of two-line service would be eliminated, a factor which would tend to improve the service of competing roads.

The Lackawanna also told the I.C.C. that approval of this plan would not disturb present traffic and operating relationships between the Nickel Plate and its connections, and all routes "via existing junctions and gateways would be maintained and kept open."

Maine Central.—*Relief from Competitive Bidding Requirements.* — This road has applied to the I.C.C. for relief from competitive bidding requirements on a proposed $1,500,000 bond issue. The new bonds would be used to refund $1,676,000 of Portland & Ogdensburg 4½ per cent first mortgage gold bonds, due November 1, 1953. Preliminary discussions with investment bankers and institutional investors have convinced the road "that competitive bids will not be received if it is forced to offer the proposed issue to competitive bidding." This, in turn, would jeopardize other financing the road expects to undertake in the next three years. If the commission will grant the relief requested, the road believes it can find a syndicate of dealers to underwrite the proposed bonds and market them "to a large extent in the local areas served by the MC."

New Securities

Application has been filed with the I.C.C. by:

ERIE.—To assume liability for $2,880,000 of equipment trust certificates to finance in part 24 diesel-electric locomotive units costing an estimated $3,600,000.

	Description and Builder	Estimated Unit Cost
8	1,600-hp. road-switchers (American Locomotive-General Electric Companies)	$157,500
2	1,000-hp. switchers (Alco-G.E.)	103,000
3	1,500-hp. road-switchers (Electro-Motive Division, General Motors Corporation)	154,000
10	1,500-hp. road-switchers (Electro-Motive)	149,700
1	1,500-hp. road-switcher (Electro-Motive)	160,000

The certificates, to be dated September 15, would mature in 20 semiannual installments of $144,000 each, beginning March 15, 1953. They would be sold by competitive bidding, with the interest rate to be set by such bids.

Division 4 of the I.C.C. has **authorized:**

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—To assume liability for $3,990,000 of series QQ equipment trust certificates to finance in part 15 diesel-electric locomotive units and 10 passenger-train cars costing an estimated $5,341,000 (*Railway Age*, August 4, page 18). Division 4 approved sale of the certificates for 99.05 with interest at 3⅛ per cent—the bid of Halsey Stuart & Co. and six associates—which will make the average annual cost of the proceeds to the road approximately 3.28 per cent. The certificates, dated September 1, will mature in 30 semiannual installments of $133,000 each, beginning March 1, 1953. They were reoffered to the public at prices yielding from 2.15 to 3.3 per cent, according to maturity.

Dividends Declared

BANGOR & AROOSTOOK.—$5.00 preferred, $1.25, quarterly, payable October 1 to holders of record September 5.

BEECH CREEK.—50¢, quarterly, payable October 1 to holders of record September 10.

DAYTON & MICHIGAN.—common, 87½¢, semiannual, payable October 1 to holders of record September 15; 8% preferred, $1, quarterly, payable October 1.

DENVER & RIO GRANDE WESTERN.—$1, payable September 16 to holders of record September 5.

READING.—4% 2nd preferred, 50¢, quarterly, payable October 9 to holders of record September 18.

UNION PACIFIC.—common, $1.25, quarterly; 4% preferred, $1.00, semiannual, both payable October 1 to holders of record September 8.

Security Price Averages

	Sept. 2	Prev. Week	Last Year
Average price of 20 representative railway stocks	64.66	63.54	53.64
Average price of 20 representative railway bonds	92.50	92.73	92.31

RAILWAY OFFICERS

EXECUTIVE

The PULLMAN COMPANY has elected **R. J. Lascelles** as vice-president and comptroller, with headquarters at Chicago, replacing **C. H. Westbrook,** who has retired under the company's retirement program. Mr. Westbrook will

R. J. Lascelles

continue as a director and member of the executive committee. Mr. Lascelles started with Pullman in 1921 as special accountant, later becoming assistant to vice-president and comptroller, than assistant treasurer. He became treasurer of Pullman in 1939 and was elected secretary and treasurer in 1947.

FINANCIAL, LEGAL & ACCOUNTING

William D. McLean, solicitor of the SOUTHERN at Washington, D.C., has been appointed tax commissioner at Atlanta, Ga., succeeding **Haddon Johnson,** who has retired after 33 years of service. Mr. McLean was born on December 14, 1919, at New York and attended the University of Virginia (B.A., 1941, LL.B., 1947). He entered the service of the Southern at Washington on December 15, 1947, as law assistant and was promoted to solicitor in January 1951.

Mr. Johnson was born on December 30, 1892, at Greer, S.C. After attending Bailey Military Institute and the University of South Carolina he practiced law until May 1917, when he joined the United States Army. Mr. Johnson entered the service of the Southern in September 1919 as a claim agent at Winston-Salem, N.C., later transferring to Lynchburg, Va. In July 1920 he was appointed law assistant at Washington and in February 1923 became tax commissioner at Atlanta.

Sidney P. Chockley, assistant treasurer of the NORFOLK & WESTERN, has been named treasurer, with headquarters as before at Roanoke, Va., succeeding the late **Frank G. McGee,**

whose death was reported in *Railway Age* September 1, page 106.

OPERATING

Edwin G. Overmire has been appointed superintendent of freight loss and damage prevention of the NEW YORK CENTRAL at New York. **George M. Grebert,** supervisor of loss and damage prevention, has been appointed assistant superintendent of property protection at New York.

The ILLINOIS CENTRAL has announced appointment of **F. A. Fitzpatrick,** trainmaster at Kankakee, Ill., as assistant to general superintendent transportation at Chicago. The following trainmasters have been transferred:

W. A. Johnston, Jr., from Carbondale, Ill., to Kankakee; **C. S. Scott,** from Centralia district to St. Louis district, with headquarters at Carbondale; **F. J. Duggan,** from Palestine, Ill., to Carbondale; **E. R. McMahon** from Fulton, Ky., to Hawthorne, Ill.; **Sebra Evans** from Memphis to Fulton; **J. R. Sullivan** from Waterloo, Iowa, to Champaign, Ill.; and **J. F. Reents** from Vicksburg, Miss. to Waterloo. **Carl Boyd** has been appointed trainmaster at Vicksburg, and **H. F. Smith** has been named trainmaster at Memphis.

TRAFFIC

John G. Martin has been appointed general agent of the QUANAH, ACME & PACIFIC at New York.

E. J. Schettler, commercial agent of the NORFOLK & WESTERN, has been appointed general agent, with headquarters as before at Cleveland, succeeding **J. P. McGuire,** who has retired after almost 49 years of service.

The office of **William E. Carbone,** general passenger agent of the DELAWARE, LACKAWANNA & WESTERN has been transferred from 140 Cedar street to 500 Fifth avenue, New York. **Robert H. Taylor,** division passenger agent at Newark, N.J., has been appointed assistant passenger traffic manager, a newly created position, at New York. **Theodore V. Wall,** city passenger agent at New York, succeeds Mr. Taylor at Newark. **Charles F. Feltham,** general eastern passenger agent at New York, has retired after more than 42 years of continuous service. Mr. Feltham's position has been discontinued.

Mr. Taylor entered Lackawanna service on September 11, 1923, as junior clerk in the freight department and subsequently advanced to secretary to the passenger traffic manager, chief clerk to assistant general passenger agent and city passenger agent at Buffalo, New York and Newark, successively. He was promoted to division passenger agent at Newark on June 1, 1945.

Mr. Feltham entered the service of the Lackawanna on April 15, 1905, as temporary clerk to the agent at Cresco, Pa., subsequently advancing to telegraph operator, ticket seller at Scranton, traveling passenger agent at Chicago and division passenger agent at Newark. He was promoted to general eastern passenger agent at New York on June 1, 1945.

ENGINEERING AND SIGNALING

G. R. Doull, principal assistant engineer of the Atlantic region of the CANADIAN NATIONAL, has been appointed assistant chief engineer of that region, with headquarters as before at Moncton, N.B. **R. P. Puddester,** district engineer at St. John's, Nfld., has been appointed principal assistant engineer at Moncton, succeeding Mr. Doull. **A. R. Penney,** assistant district engineer, has been appointed division engineer of the Newfoundland district, with headquarters as before at St. John's. The position of district engineer at St. John's has been abolished.

V. C. Hanna, superintendent of bridges and buildings of the TERMINAL RAILROAD ASSOCIATION OF ST. LOUIS, has been appointed chief engineer, succeeding **Huriesco Austill,** who has retired.

Mr. Hanna received his C.E. degree from Alabama Polytechnic Institute in 1921 and entered railroad service in 1923 as assistant engineer on the

V. C. Hanna

Mobile & Ohio (now Gulf, Mobile & Ohio). He was appointed assistant engineer—system in 1937, and four years later went with the Litchfield & Madison as chief engineer. In September 1941 Mr. Hanna joined the TRRA as assistant engineer in charge of construction and later held the position of supervisor of bridges and buildings. He was appointed superintendent bridges and buildings in 1943.

Col. Austill was graduated from the University of Alabama in 1906 with a C.E. degree. He entered railroad service in 1901 as a rodman on the Louisville & Nashville, later serving in a number of engineering capacities with several railroads and the Republic Iron & Steel Co. In 1910 he went with the M&O as assistant engineer and a year later was promoted to bridge engineer.

Huriesco Austill

Following military service during World War I, Col. Austill returned to the M&O as bridge engineer, and in 1937 was promoted to chief engineer. Four years later he was appointed chief engineer of the TRRA.

OBITUARY

Walter R. Dyer, president and general counsel of the FORT DODGE, DES MOINES & SOUTHERN, whose death was reported in *Railway Age* July 21, page 66, was graduated from the University

Walter R. Dyer

of Iowa in 1910 with an LL.B. degree, and began his career with the railroad as a claim agent. In 1940 he was appointed general counsel, and was elected president and general counsel in 1946.

Joseph Francis Flynn, 55, general agent of the NORFOLK SOUTHERN at Cincinnati, Ohio, died on August 22 at Jewish hospital, Cincinnati, following a lingering illness over the past three years.

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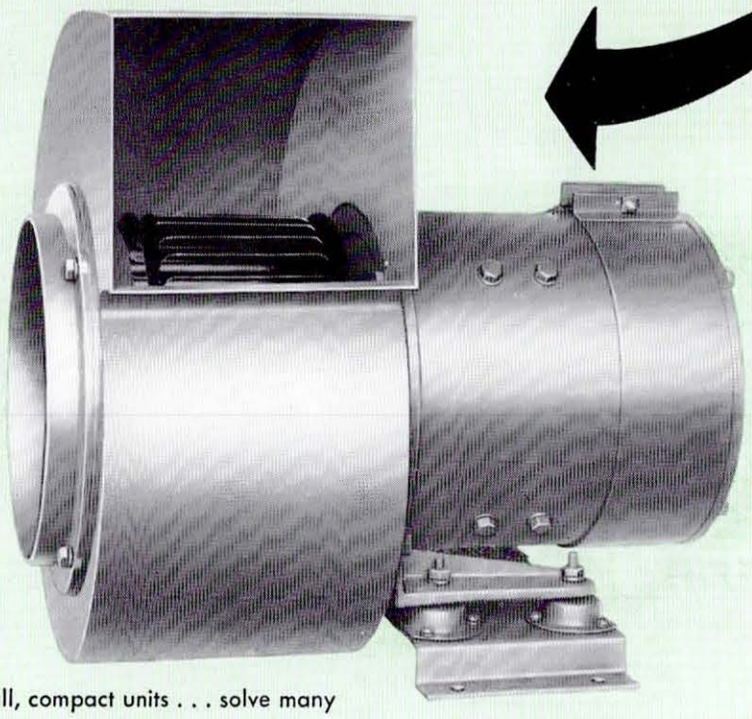

- small, compact units . . . solve many application problems
- blowers are designed so that air outlets may be positioned in one of four quadrants
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- class B material used throughout, for long dependable operation
- fan motors and wheels can be removed from housings without disturbing duct systems
- *available in four sizes, for air delivery at 500, 1000, 1600, and 1900 CFM; motor voltage 32, 64 or 110. For additional information write for "Safety" Blower Unit Bulletin.*

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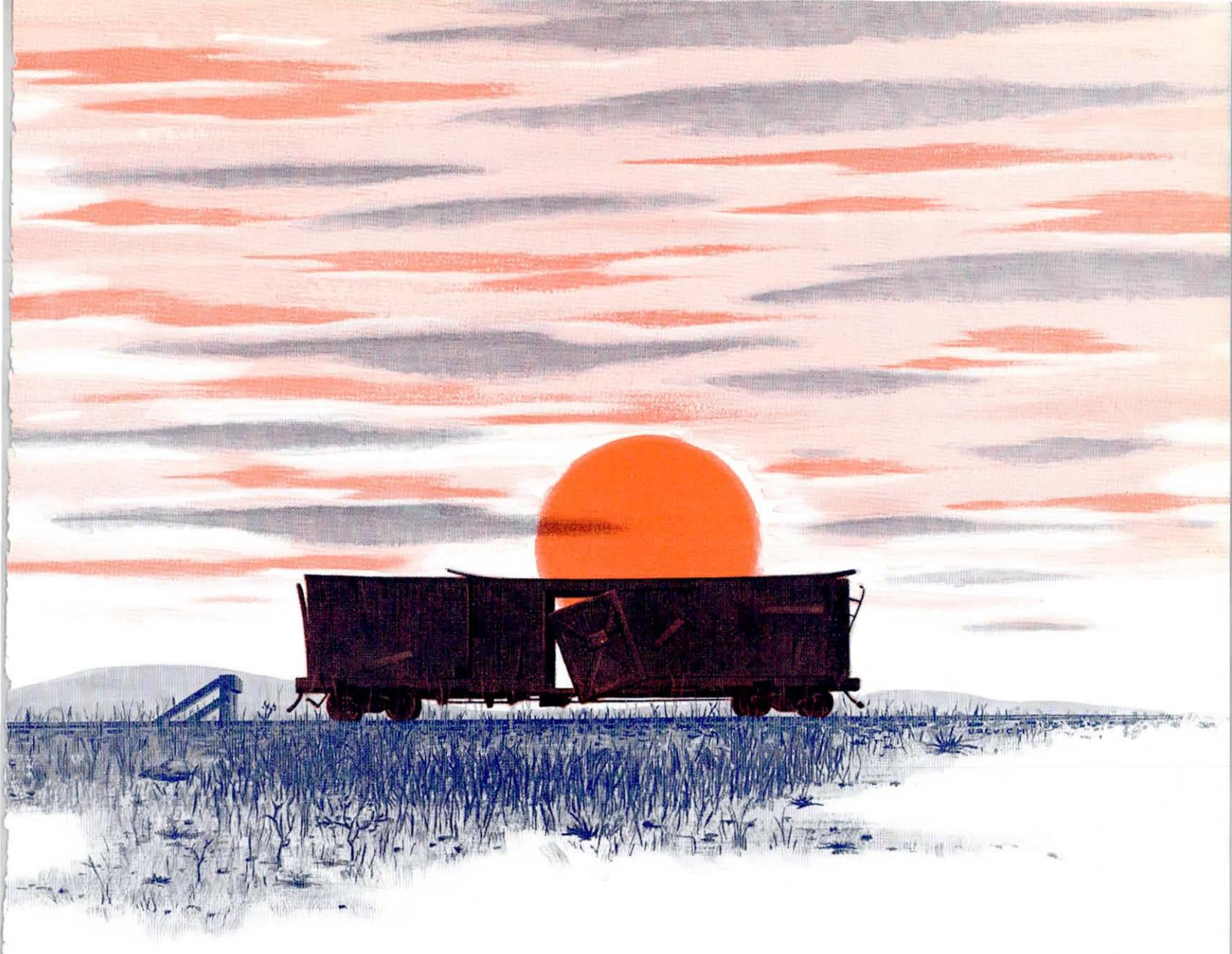
SAFETY COMPANY PRODUCTS INCLUDE: Air-conditioning Equipment • Genemotors • Generators • Fans • Regulators Lighting Fixtures • Switchboards • Parcel Racks • Motor Alternators • Dynamotors • Motor Generators • Dual Voltage MG Sets

When the sun sinks over a box car

...tired wheels grind to a halt. A final echo of proud yesterdays...then pathetic stillness. / / / Perhaps this car can be rebuilt—major repairs made, so it will roll again. But these miles will be costly! Soon it returns. More repairs! More expense!

a.c.f.

CAR



TO REBUILD OR TO BUY?

...always a problem. When you consider maintenance costs (which will eventually *exceed* the purchase price of a new car), it becomes less of a problem to decide. And don't forget the lost revenue of idle "rolling stock". Count these and many other advantages and we're sure you'll decide it is better—much better—to start tomorrow with a bright new car.

Why not check with ACF—builders of all-welded cars, second to none. Standardized design and assembly line construction gives you a better car at lower cost. Ask your local ACF Representative for the facts. American Car and Foundry Company, New York • Chicago St. Louis • Cleveland • Philadelphia Washington • San Francisco

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NOW! Get the Book That Protects the Money You Invest in Diesels

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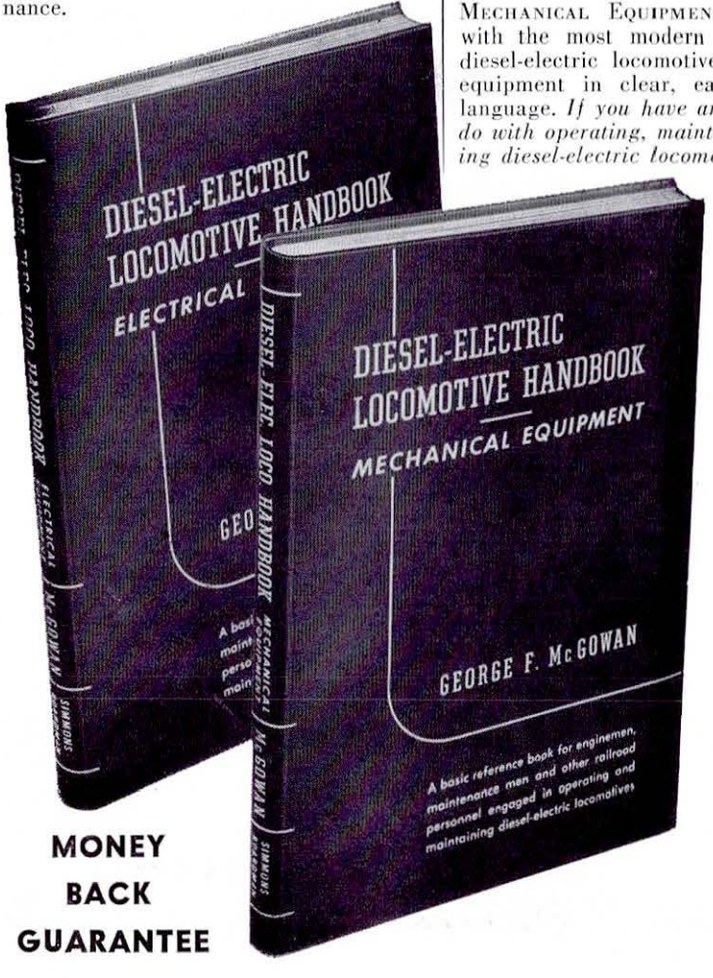
SEND TODAY for this great new book! Packed with photos and diagrams, it brings you up-to-the-minute facts — *the latest available* on diesel-electric locomotives and equipment.

Here is everything you need and want to know—*written from the viewpoints of the men in the cab and the shop*—by an experienced railroad man—*all checked and approved by the leading locomotive builders.*

For your convenience this handbook is sold separately in two volumes: *Mechanical Equipment and Electrical Equipment.* Read the descriptions that follow and you'll agree: *Here is essential information you cannot afford to be without!*

MECHANICAL EQUIPMENT

Everything necessary to complete understanding of diesel-electric locomotives is included—how diesel-electric locomotives are constructed, the reasons behind their design, proper operating methods, things that can go wrong with them, "trouble-shooting," and effective servicing and maintenance.



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GIVES YOU DETAILS OF EACH PART

Among the chapters are: The Development of the Diesel-Electric Locomotive; Fundamentals; Lubricating and Cooling; Fuel System—Fuel; Pistons, Piston Rings, Liners; Connecting Rods, Bearings, Crankshafts; Valves, Timing, Heads; Governors, The Steam Generator; The Air Compressor; and The Gas Turbine Locomotive.

DESCRIBES LOCOMOTIVES BY MAKE

Separate chapters are devoted to accounts of diesel engines made by The American Locomotive Company, Baldwin Locomotive Company, Electric-Motive Diesel, Fairbanks, Morse & Company, and Lima-Hamilton Corporation. Each engine, its parts, and its non-electrical auxiliaries are described and illustrated in full detail.

SOLVES JOB PROBLEMS FOR YOU

MECHANICAL EQUIPMENT provides you with the most modern information on diesel-electric locomotives and auxiliary equipment in clear, easy-to-understand language. *If you have anything at all to do with operating, maintaining or servicing diesel-electric locomotives,* you'll use this book as a handbook to help you solve problems that you meet in your daily work, and as a reference to keep you on top of developments in this expanding field.

ELECTRICAL EQUIPMENT

You get full descriptions of all major pieces of electrical equipment and all their parts: how they are constructed, how to operate them, how to take care of them and how to fix them if they go wrong.

There are chapters on: The Electric Generator; The Traction Motor; Exciters, Auxiliary Generators, Motor Blowers, Dynamic Braking; Batteries; and Contactors.

DETAILS EQUIPMENT BY MAKE

The electrical and control equipment of the major builders: Alco-G.E., Electro-Motive Division, Lima-Westinghouse, Baldwin-Westinghouse, and Fairbanks, Morse-Westinghouse is completely analyzed in individual chapters.

You need only a layman's knowledge of electricity to gain the utmost benefit from this book—because the subject is presented in *practical language* by an experienced railroad engineer.

ANALYZES ELECTRICAL SET-UP

You learn why the electrical transmission has been adapted to the diesel locomotive; its advantages, disadvantages and limitations. You get a review of electrical fundamentals; definitions of terms and explanations of how to use the most common electrical formulas. Schematic wiring diagrams are explained and their special symbols identified.

EXPLAINS OPERATION, SERVICING, MAINTENANCE

Yes, *here is your opportunity to gain a complete understanding of the electrical equipment of today's diesel-electric locomotives,* to learn how to handle, service and maintain the equipment.

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Enclosed find ..... for the book(s) checked below. I understand that you will ship them to me postpaid, and that if I am not completely satisfied I may return them any time within 10 days of receipt for a full refund of my money.

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9-8-52

(Continued from page 58)

The smaller "Southern region" section will cover the East St. Louis-St. Louis metropolitan area. The railroad defense organization for the Chicago metropolitan area was rescribed by *Railway Age* December 23, 1950, page 20. At the time of its founding there was no comparable organization for any other city or state.

Functional supervision of Illinois railroad civil defense activities has been implemented by appointment of J. J. Brinkworth, operating vice-president of the New York Central at Chicago, as chief operating officer of the defense organization. Mr. Brinkworth will work with Mr. Lohr through Brigadier General D. O. Elliott (retired), state deputy director of civil defense for transportation, and C. P. Richardson, terminal engineer, Chicago South Side Railway Terminal Committee, who is the assistant deputy for railroads.

Special executive and operating committees for railroads will be created under Mr. Brinkworth's jurisdiction. The prime function of the executive committee will be to "harmonize railroad interests and attain those agreements between the various carriers affecting unity of action in case of enemy attack." The operating committee will review personnel appointments and emergency operating plans and act as advisers to the chief operating officer.

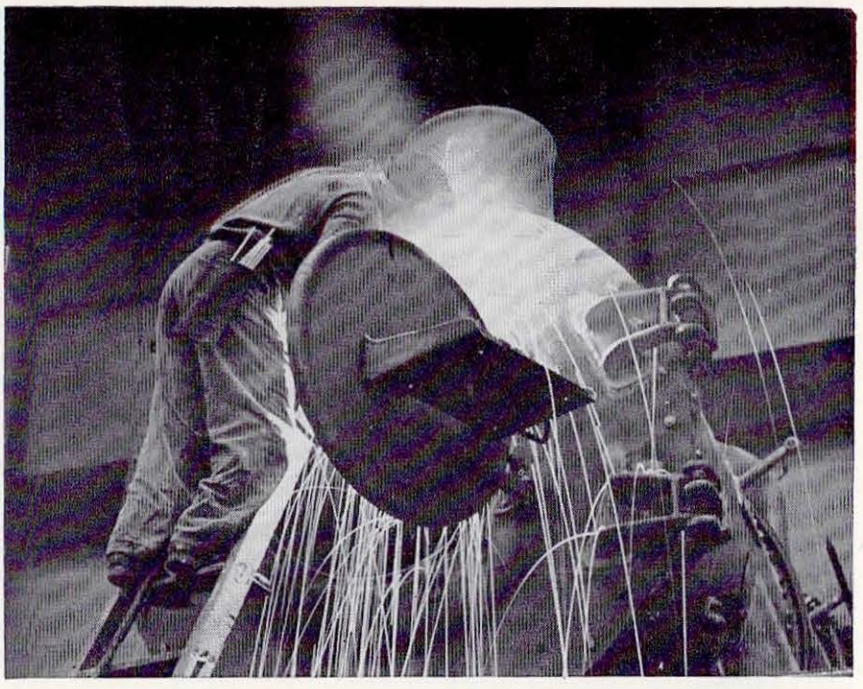
Under the defense set-up, railroads will be directly responsible for restoration of their damaged facilities and for train operation following an enemy attack. Railroad personnel will not be called upon for other civil defense

"YOUR AD BELONGS HERE"

The second annual advertising competition sponsored by the Association of Railroad Advertising Managers will be held from October 31 through November 15, and will be open to any advertiser and any campaign in newspapers, magazines or other recognized media between November 1, 1951, and October 31 of this year.

The purpose of the competition is to "encourage advertisers to augment individual and collective efforts of railroad advertisers in creating a better understanding by the public of the importance of railroads in the American transportation scheme," and for "encouraging the development of additional rail traffic." There will be an award to the winner in both the "institutional" and "direct traffic development" categories.

Proofs of ads are to be submitted to C. D. Perrin, assistant secretary for the association, at 85 West Harrison street, Chicago 5. In addition to the plaques to be awarded to the winner in each category, there will be a number of certificates of merit for "runners up."



HERE'S TIME-SAVING CONVENIENCE for your repair-shop electrical needs

As a result of today's general rise in rail traffic, repair shops throughout the nation face greatly increased work loads.

That's why you'll find it profitable to get *all* your electrical needs from a single source . . . from Graybar. You'll find this helpful time-saving service really worthwhile . . . an easy way to prevent the delay and inconvenience caused by piecemeal inquiries to individual suppliers.

Through a nation-wide warehouse system, Graybar distributes the products of nearly 300 of the nation's leading manufacturers—a total of over 100,000 items covering practically everything electrical needed by your shops. Here are just a few of the items—all first-quality—you can get on a single order from Graybar.

Power Apparatus — G-E motors, controls, panelboards, fuses.

Lighting Equipment — fluorescent, incandescent, and mercury fixtures — plus lamps — for shops, yards and offices.

Tools — saws, screwdrivers, nibblers, hammers, soldering irons — hand tools and power-operated tools of all kinds.

Everyday Supplies — wire, cable, connectors, lugs, tape, conduit, fittings.

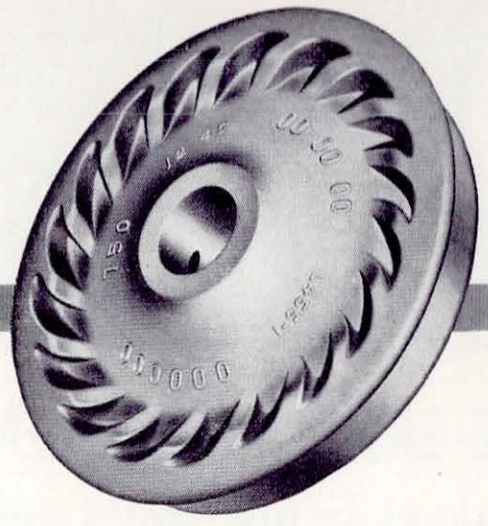
Graybar service to railroads also includes the help of specialists in the selection, procurement, and application of pole-line supplies and communication equipment.

Your near-by Graybar Representative stands ready to give you up-to-the-minute information on prices and local delivery conditions to help you plan ahead for "on schedule" deliveries. Please see the Pocket List for the address of our nearest office. *Graybar Electric Company, Inc. Executive Offices: Graybar Bldg., New York 17, N.Y.*

142-209

OFFICES AND WAREHOUSES IN OVER 100 PRINCIPAL CITIES

I.C.C. figures prove...



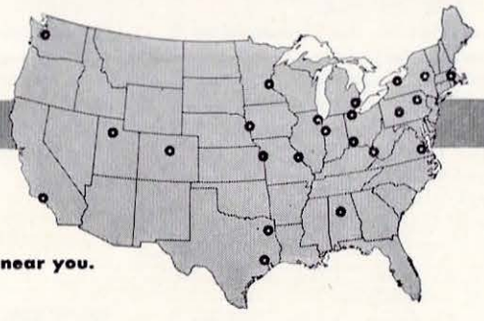
that the *safest* wheel you can put in freight car service is the AMCCW chilled car wheel

The AMCCW chilled car wheel, improved in design so that it has more brackets—with thicker, heavier, more continuous flange support—and heavier tread on both rim and flange sides, has been in service since it was approved by the AAR as standard in 1950. Even before this the record shows the chilled car wheel, as produced at AMCCW plants, to be the safest wheel in freight car service. The record should continue to improve in the future as more improved AMCCW wheels go into service.

CAR MILES OF SERVICE PER DERAILMENT INVOLVING WHEELS

AMCCW WHEELS		NEXT BEST CAR WHEEL
85 million	1946	73 million
81 million	1947	71 million
77 million	1948	72 million
115 million	1949	86 million
81 million	1950	67 million
91 million	1951	76 million

The base used is ICC figures on freight car miles, apportioned to the different wheels, and derailments reported to the ICC attributed to wheels.



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duties. One important phase of the program is the provision of a comprehensive advance plan for rerouting traffic from damaged lines to those located outside the stricken areas.

Tennessee Intrastate Rates

The Interstate Commerce Commission has ordered railroads in Tennessee to increase intrastate freight rates on coal and wood to bring such rates up to the interstate level. The roads must act on or before November 28, upon 30 days' notice.

This action by the commission resulted from failure of the Tennessee Railroad and Public Utilities Commission to approve intrastate increases equal to those approved by the I.C.C. in Ex Parte 166 and Ex Parte 168.

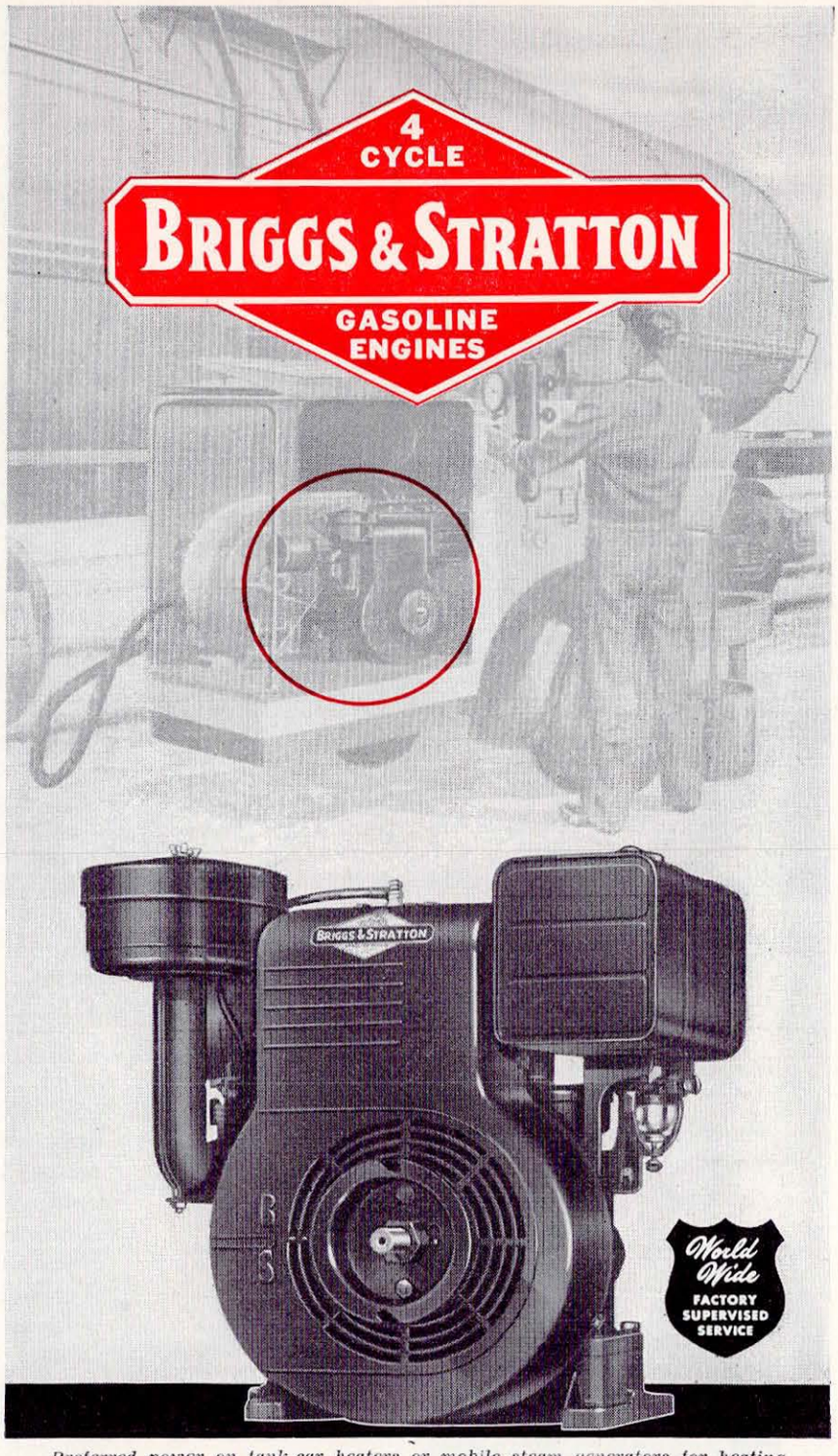
Earlier this year the I.C.C. found the

Briefly . . .

. . . A special motion picture entitled "Miracles for Millions" is to be produced as one of the features of the Centennial of Engineering currently being celebrated in Chicago. The 16-mm. sound film will be a full-color portrayal of the part engineering has played in building America's high living standards. Because the film will be later distributed for showing to schools and colleges as well as churches and civic bodies, it is expected to be an effective means of attaining contact with prospective engineers of tomorrow. It will be produced by John Ott Pictures, Inc., of Chicago, and distributed through Ideal Pictures, Inc.

. . . The Pennsylvania has announced faster running times for trains between Chicago and Columbus, Ohio, Cincinnati, and Louisville, Ky. The reductions in time vary from five to 30 minutes. Trains involved include the "Fort Hayes" and the "Ohioan" between Columbus and Chicago; the "Blue Grass Special," the "Daylight Express" and the "Kentuckian" between Chicago and Louisville; and the "Southland" and "Daylight Express" between Cincinnati and Chicago.

. . . The Delaware, Lackawanna & Western is polling its commuter passengers to determine to what extent New Jersey people attend, or might attend, legitimate New York theaters if a recently inaugurated experiment of having an early (7 p.m.) curtain becomes a general practice. Passengers are asked to indicate on printed forms the frequency of their theater attendance, whether they prefer the early curtain or the traditional theater time, whether they use rail transportation when attending the theater, and what the effect on their attendance would be if the earlier curtain were generally introduced.



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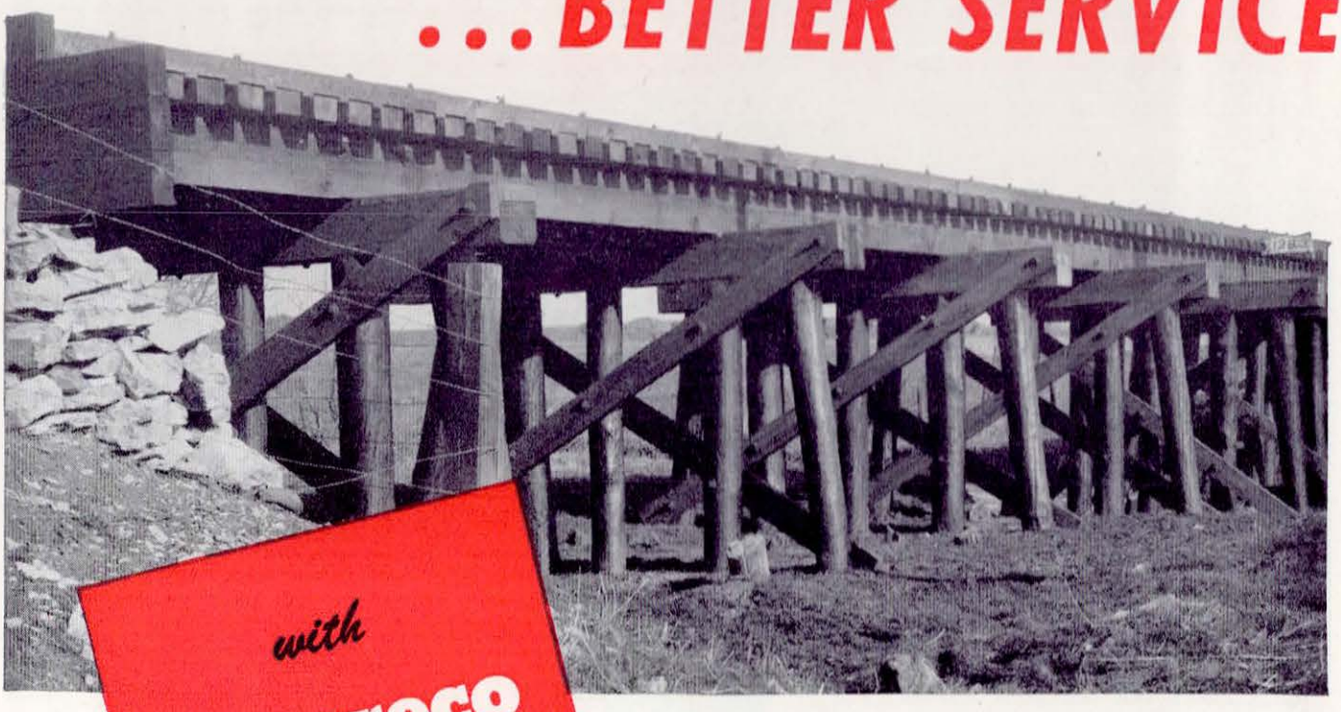

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lower intrastate rates were an unjust discrimination against interstate commerce. A final order was withheld to give the Tennessee commission time to approve the increases, but failure of the latter group to do so led to the present order (*Railway Age*, June 23, page 18).

Waybill Study

Another waybill study has been issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. It is Statement No. 5229, State-to-State Distribution of All Commodities Combined, Traffic and Revenue. The study is based upon terminations in 1951.

West Coast Superintendents Talk "Hot Boxes"

Following a "charge" by R. E. Hallawell, general manager of the Southern Pacific, some 78 members of the American Association of Railroad Superintendents from 11 western roads launched into spirited discussion of the hot box problem that set a fast pace for the two-day regional "post convention" meeting in San Francisco. The meeting, which was designed to bring highlights of the association's Chicago convention (held June 4-6, and detailed in the June 16 *Railway Age*, page 68) to members in the Far West, turned out to be more productive of floor discussion, *per capita*, than any previous meeting of the superintendents, regional or national.

O. L. Gray, general manager of the Santa Fe, and a director of the association, was the principal speaker at the August 7 luncheon meeting. Discussion leaders included H. C. Munson, vice-president and general manager of the Western Pacific ("Meeting the Manpower Problem"— report of Committee No. 2); T. T. Blickle, mechanical superintendent, Santa Fe, and vice-president of the Pacific Railway Club ("Have Expected Economies of Dieselization Been Realized?"—report of Committee No. 3); and W. J. Fox, terminal superintendent, Union Pacific, ("Yard Operations"—report of Committee No. 1). The meeting was presided over by Past President C. I. Morton, superintendent, Seaboard Air Line; Homer Bryan, retired assistant general manager, Western Pacific, and permanent west coast chairman of the association, and F. S. Wagenbach, general manager, Pacific Electric.

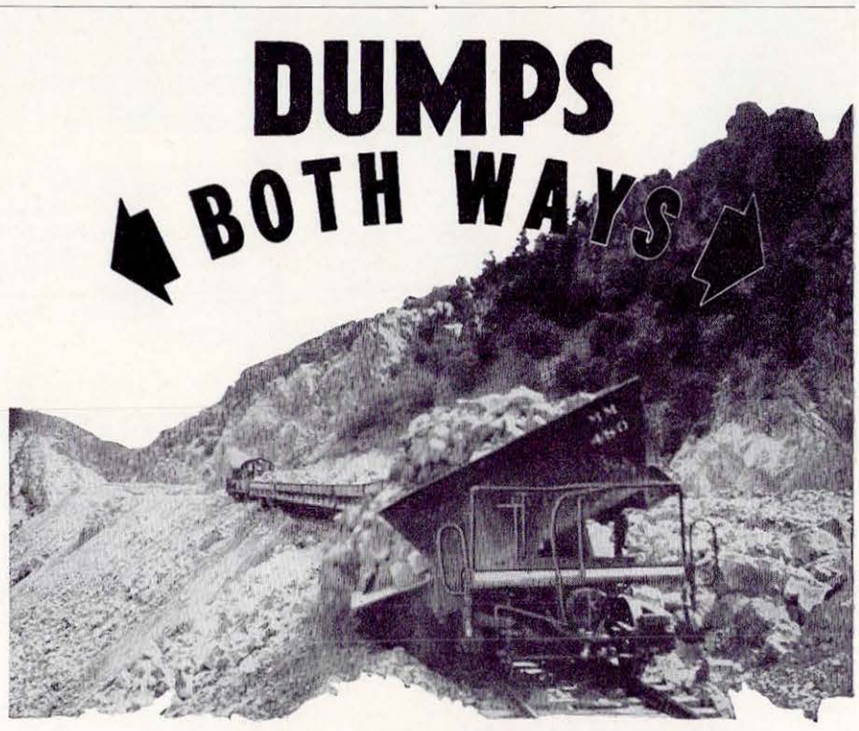
Three-Point Charge

Mr. Hallawell charged the superintendents with three points of responsibility which he said, are too often overlooked: (1) "Establish your lines of communication not only upward to management, but downward to the people who work for you." A man may go about his duties feeling abused and that management is shortsighted simply because he has not been fully informed as to the "why" of management's decision on some matter affecting him, Mr. Hallawell said. (2) "Understand that a one-man division is never a successful division; there are too many ramifications and responsibilities." He said that when a superintendent delegates responsibility, he must also delegate authority—then supervise to foster properly development of those who will eventually follow in his footsteps. (3) "Organize your time so that you can devote at least a minor portion of the available hours to rest and relaxation to the end of conserving your physical and mental well-being."

A review by B. M. Brown, general superintendent of motive power of the SP, of the formal report of Committee No. 5 ("Hot Boxes—Their Effect on Transportation and What Is Being Done about Them"), produced a "swapping" of experiences. Among remarks from the floor that ensued:

"A burned journal runs into money, yet, with our trains growing longer all the time, a trainman does not have the opportunity to watch that he had when we were running shorter ones. Regardless of this, we are trying to get them to do a better job."

"We have a problem which may be a case of too much oil, due to the collars behind the journal and the packing not holding the oil. There is a film of oil on the rail . . . we have had some accidents



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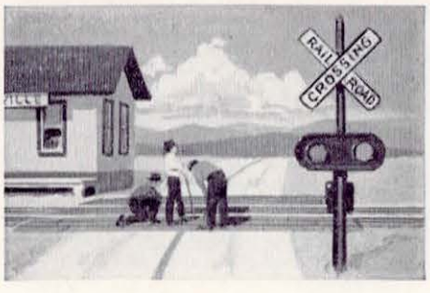

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with motor cars . . . The diesel may be indirectly responsible because, with the dynamic brake, we do not burn this oil off of car wheels as we formerly did."

"I've noticed a trend: November is always an excellent month; July is always very poor. There are mechanical reasons of course, but there would seem to be operating reasons too."

"We went to use packing retainers about 1948, and I found, in examining cars at terminals, that the retainers kept the packing in first-class shape."

"We put on a couple of cars with sealed lids and dust guards about two and a half years ago. They had no packing. They operated quite successfully, but we had to check them every trip."

"The roller bearing has a great future, but there are two or three things that have got to be worked out. One is first cost; another, a universal design."

"When our impacts jump [on clock-type registers] the number of hot boxes jumps up at the same time . . . We have a considerable number of our hot boxes a short distance out of the terminal."

"Many of us blame the poor car oiler, yet we often do not give him sufficient time to cover the train . . . I do not think the roller bearing will be the solution until such time as they can go from one wheel change to the next without having oil or grease added."

Four-Way Responsibility

Today, to maintain a smooth-working organization, management must balance demands of employees, customers and the general public along with those of stockholders, Mr. Gray told the superintendents.

"The stockholder is entitled to an equitable profit on his investment; the employee, a just wage for a good day's work; the customer, good service at a fair price; and the general public, to know the whys and wherefores of the entire business operation."

"Today's stockholders have indicated their cooperation in management's program by allowing men who know the business to run it with as little interference as possible. Employees, on the other hand, are probably the greatest challenge to management.

"The average worker, I believe, realizes that his earnings, his standard of living and his job depend upon a profitable, stable and productive company — but he doesn't know exactly why. Management must find a way of impressing him in simple, direct terms . . . why he and management have a joint responsibility. This can only be done by cooperation of responsible management and responsible labor leaders all committed unreservedly to the belief that the worker and the employer can, will and must work together as a team where none will profit at the expense of the other.

"As far as the man who buys our services is concerned, we simply must produce good service or he goes elsewhere.

"Management must aim, nowadays, not only to do a good job, but to see that the public knows of the company's performance and appreciates it.

"Modern railway management is setting the pace for the entire American free enterprise system principally because it realizes its responsibilities to these four groups."

Mr. Munson, in summarizing the "Manpower Problem" committee report, added some comments of his own. Among them:

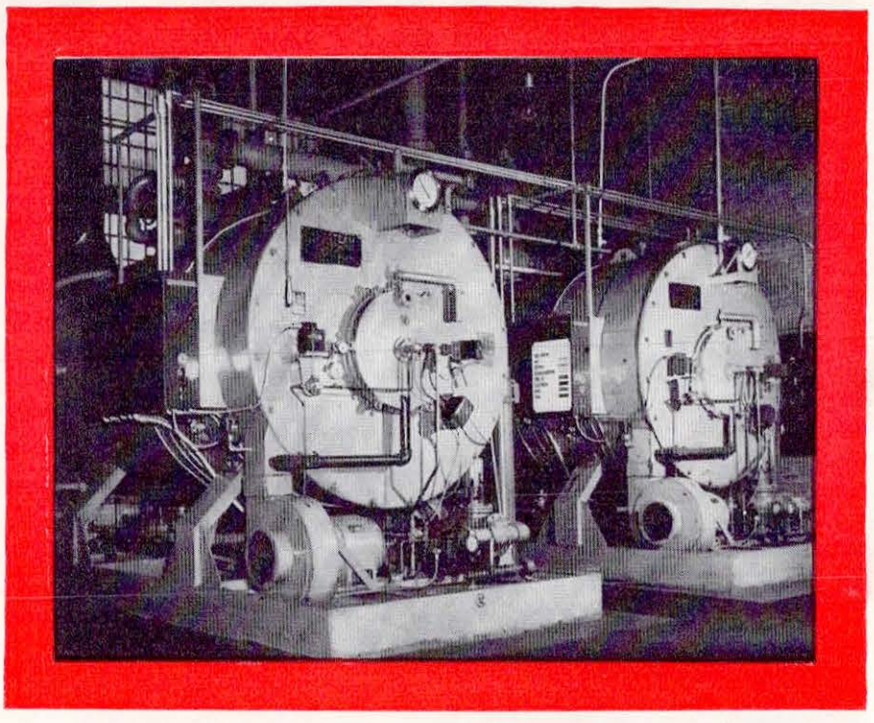
"In employing people, regardless of what category they may be in, one of the things railroads are weak in is proper orientation of the new employee so that he may himself know what kind of a job he has and what is expected of him.

"What about the man who leaves your property? Do you find out why he left so you might be able to prevent the next man's leaving? What about differentials between jobs to make promotions attractive?

"In many spots it is too meager—and often it is in the minus direction because of high wage scales and long working hours.

"In competing with other industries [on the labor market] we have got to admit that the five-day week should have some beneficial results, particularly among the non-ops . . . We have made many improvements toward better working conditions, but we can't rest on our laurels and except to compete with other industries. Remember, too, most industries are concentrated in a few buildings, whereas we are scattered and cost and complications are multiplied accordingly.

"On our railroad we are trying an arrangement wherein supervisory operating officers, traditionally tied down to the telephone, will be released from any responsibility whatsoever from the telephone on two consecutive days per month. It isn't mandatory; it is simply up to that individual to select a time and see whether it can be done. There are times when you can't do it, but we are trying it out to see whether it will have any beneficial effects on our supervisory officers."



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The AMESTEAM Generator is completely automatic; no boiler room attendants are required. Burns all types of fuel oil from Bunker C down to No. 1, as well as natural gas. Better than 80% thermal efficiency is guaranteed. Single units from 10 to 600 hp. Design pressure — 15 to 200 lbs.

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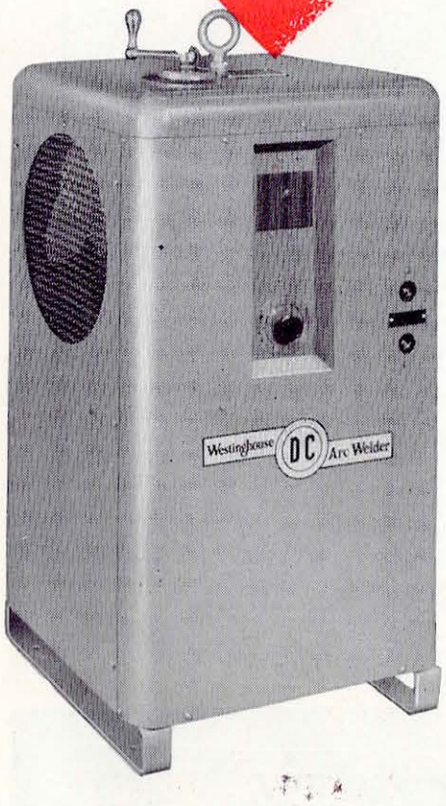

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Westinghouse RA Welders with new positive arc-drive control now prevent shorting when used on "drag" welding applications. In addition, they allow complete penetration on root passes of vertical and overhead welds. Arc-drive control is obtained by adjusting the ratio of short-circuit current to welding current without changing open-circuit voltage. Actual amount of arc-drive current can be varied by the operator.

For information on this improved RA Welder or other Westinghouse Welding Equipment, write Westinghouse Electric Corporation, Welding Division, P. O. Box 868, Pittsburgh 30, Penna. Ask for Welding Booklet B-5453.

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Current Publications

PERIODICAL ARTICLE

Those Were the Engines, by Henry B. Comstock. Argosy, August 1952, pp. 28-31 and 63-65. Popular Publications, Inc., 205 East 42nd St., New York 17. Single copies, 25 cents.

A full-color photographic tribute to "the Vanishing Americans—the smoky, clattering, glamorous steam locomotives that have been so large a part of American life and progress." A short account of each of the historic locomotives (most of them members of the "cast" of the Railroad Fair pageant, "Wheels-a-Rolling") supports the series of 13 brilliantly colored photographs. Additional copies of the photos alone can be obtained from the publisher at 25 cents each.

BOOKS

Illustrated Petroleum Dictionary and Products Manual. 502 pages, 5½ in. by 8¾ in. Petroleum Educational Institute, 9020 Melrose ave., Los Angeles 46. $8.

This book, prepared on an elementary level, is especially designed for those who do not possess a technical background in petroleum. Its purpose is to provide products information for sellers, buyers, and consumers of petroleum products, and to make available a dictionary of terms commonly used in the petroleum industry and in other industries in connection with petroleum, its products and the equipment utilizing these products. In preparation of the book, local authorities were consulted in an effort to clarify some of the unclassified terms now in general use.

Comprehensive Bibliography of Cement and Concrete, 1925-1947, by Floyd O. Slate. 491 pages, lithoprinted. Engineering Experiment Station, Purdue University, Lafayette, Ind. $5. Make remittance payable to Purdue University.

This bibliography contains over 40,000 references which represent substantially the world's scientific literature in the field of cement and concrete. References are listed by subject and a complete author and chronological index is presented. There are 24 major subdivisions covering history, bibliography, handbooks and reference books, reviews and symposia, cement, pozzolana, admixtures, aggregates, concrete, mortar and concrete coatings, miscellaneous cement compositions, reinforced, architectural, lightweight, ready mixed and pre-cast concrete, soil cement, processes for manufacture of concrete, winter concreting, forms, construction, economy, health and accidents.

PAMPHLETS

Motor Transportation Regulation. Selected Cases and Questions For Study. 59 pages. Edited by G. Lloyd Wilson, professor of transportation and public utilities, University of Pennsylvania, Philadelphia. Associated Traffic Clubs of America, Federal Reserve Bank bldg., Cincinnati 2, Ohio.

A selection of representative decisions of federal courts and of the Interstate Commerce Commission which indicates the scope of regulation of highway and motor transportation by municipal, state and federal governments. Such subjects as state regulation of highway use, state regulation of interstate commerce, federal regulation, and municipal regulation are covered with the intent of providing a brief presentation of the salient points indicating how, and the extent to which, motor vehicle operation and transportation are regulated in the public interest.

Questions are appended to each chapter designed to guide study, and to emphasize the more important aspects of regulation.

The pamphlet is not intended as a comprehensive case book, but rather a brief presentation for students of transportation and traffic management.

Twenty-Ninth Annual Green Book Report on the Twenty-Fifth Railroad Employees' National Safety Award, Class I Railroads. Year 1951. 12 pages. National Safety Council, 425 North Michigan ave., Chicago 11.

A compilation of safety performance statistics of railroads participating in the National Safety Council's annual safety award contest. In this silver anniversary edition, special attention is given to the 10 winners, in the three different classes of awards.

TRADE PUBLICATION

Locknuts. 24 pages, illustrations. Published by Locknut Section, Industrial Fasteners Institute, Cleveland 15, Ohio.

Prepared "as a means of assisting in the most effective use of locknuts," this brochure describes and illustrates different types of locknuts. It also lists companies manufacturing the various types, from which additional information may be obtained.

FILMS

Make Your Diesel Traction Repairs Stay Repaired. 10 min., sound. Westinghouse Electric Corporation, Film division, Box 2099, Pittsburgh 30, Pa., or local Westinghouse representatives.

This film follows a diesel-electric traction motor through a shop typical of the repair shops Westinghouse maintains throughout the country. Standardized repair procedure, dependable workmanship through quality control, speed, and economy are all illustrated as the motor is inspected, repaired and tested.

The Story of Dednox. 15 min., 16-mm., sound, color. Written and produced by Telepix Corporation, Hollywood, Cal., for Spring Packing Corporation. Available to railroad groups on a free loan basis by writing George L. Green, Spring Packing Corporation, 332 South Michigan ave., Chicago 4.

This film is described as "a graphic demonstration of how moisture condensation inside railroad box cars may be safely controlled with no damage to lading. It is an actual scene-by-scene dramatization of a typical railroad claims-loss cause due to moisture condensation during shipment. Condensation causes, effects and preventive measures through spraying of Dednox are visually explained. Animated treatments point up highlights of the theme."

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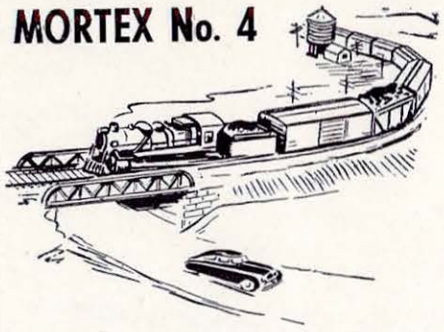

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One application of this tested coating is far superior to paints and cut-back asphalt products. It's the most practical low-cost rust preventive for roofs, interiors and underframes of steel freight and refrigerator cars, covered hopper cars used for soda ash, lime and similar products, ice bunkers and equipment exposed to acid fumes and gases.

It's tops for steel bridges, cooling system ducts and sump, outside storage tanks, tool houses and bins.

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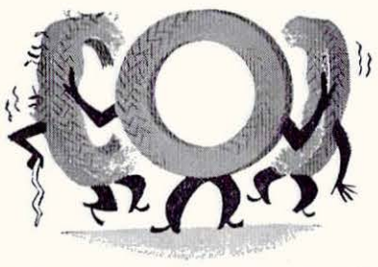
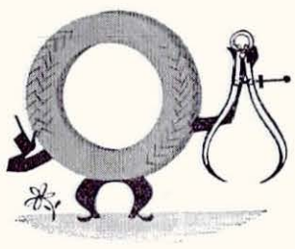
Danger! Don't mix me with old packings

Old packings may look all right, but often they are so dry and highly compressed that they may cause scoring. Play it safe and remove *all* old packing before putting new packing in place. Be sure to remove accumulations from stuffing box walls, gland follower and shaft. New packing is cheaper than new rods, shafts and sleeves!



Make sure I'm the right size



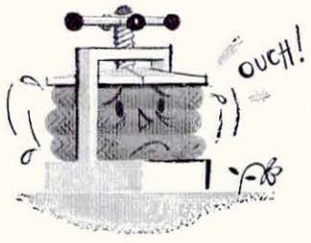
Packing that's too small may turn with the shaft. Oversize packing may cause excessive pressure and subsequent scoring. To find the correct size, check the rod or shaft diameter and the inside diameter of the stuffing box—then choose a packing to fit. In this way, allowance is automatically made for wear of the rod.

Seat me one ring at a time

Never load the stuffing box with packing rings and try to seat them all at once by tightening the gland follower. This invites trouble due to excessive gland pressure. Always install one ring at a time, making sure it's properly seated *before* the next ring is installed.

Don't squeeze me too tight!

Too much gland pressure is a common cause of packing failures. After the packing is installed, pull up the follower only sufficiently tight to insure seating of the last rings installed. Then back it off, leaving the nuts finger-tight. Don't worry about a little leakage. Actually, it's good assurance that the packing isn't too tight in the stuffing box. Besides, the liquid frequently has some lubricating qualities.



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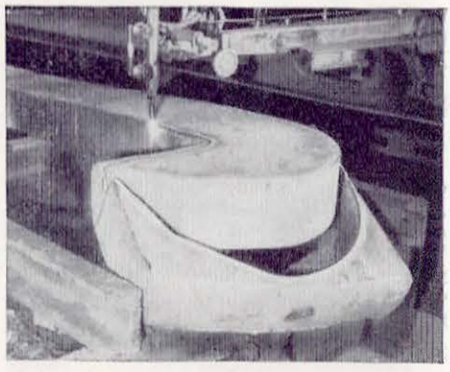
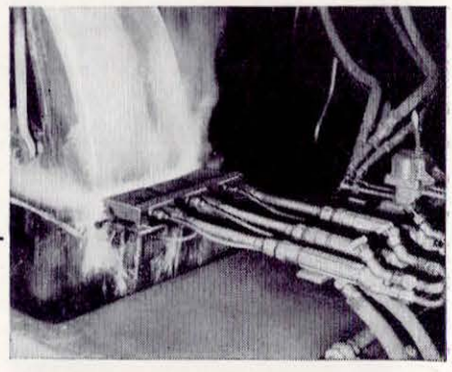
Welding . . . Rivet-cutting . . . Flame-cleaning . . . Flame-cutting . . . Flame-hardening . . . Flame-gouging . . . Flame-forming . . . Plate-edge preparation . . . Brazing . . . Soldering . . . Building up rail ends . . . Flame-hardening rail ends . . . Flame-straightening joint bars . . . Building up frogs and crossings . . .

An OXWELD cutting blowpipe easily slices through 7-in. thick steel to help make a diesel engine handling hook.



A radial buffer made of cast steel gets a long-wearing, flame-hardened case.

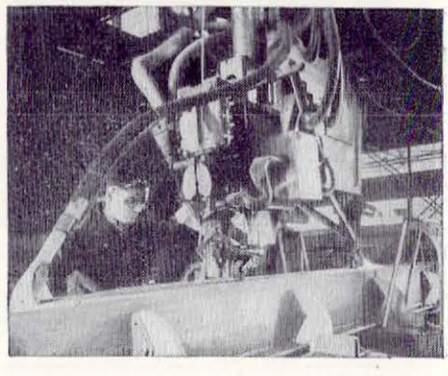


"UNIONMELT" WELDING

UNIONMELT automatic welding makes high-quality welds in steel at speeds up to twenty times faster than other methods—Steel parts up to 3 in. thick can be joined in one pass. This welding method can be used to weld straight, circular, or irregularly shaped sections and has many applications in car and locomotive shops, both for fabrication and repair. Some UNIONMELT welding jobs being done by railroads today include:

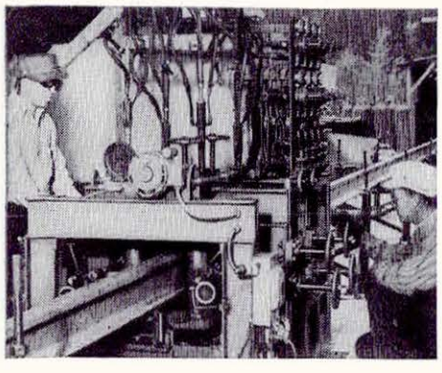
Freight and passenger car building . . . Car body repair . . . Repairs of car parts . . . Locomotive building . . . Locomotive parts repair . . .

Center sills are quickly fabricated by UNIONMELT welding.



HELIARC welding helps make repairs in a cast iron diesel cylinder head.

A modern diesel glides over a stretch of RIBBONRAIL.



Long rails are easily produced through OXWELD'S RIBBONRAIL Service and equipment.

"HELIARC" and SIGMA WELDING

In many railroad shops HELIARC and sigma welding are solving problems of welding stainless steel, copper alloys, aluminum, and other tricky-to-weld metals. Thousands of cast iron diesel cylinder heads are being repaired with HELIARC welding at great savings. Both processes are being used for reclaiming aluminum diesel pistons, and for building and repairing many other car and locomotive parts. Here are a few of the jobs on which HELIARC welding is used:

Diesel cylinder heads... Stainless tanks... Stainless diner equipment... Mild steel coach roofs... Everdur tanks... Aluminum pistons... Aluminum cylinders... Aluminum furniture...

Ribbonrail SERVICE MARK

Continuous welded rail is produced through OXWELD'S RIBBONRAIL Service and equipment. Developed in 1938, OXWELD'S welding process uses oxy-acetylene flames to produce continuous rail lengths ranging from 78 ft. up to several miles. By producing and installing RIBBONRAIL, railroads are eliminating the expense of maintaining rail joints. RIBBONRAIL has a longer useful life; cross ties are subject to less wear and tear; rolling stock is not subject to the jolts and vibrations caused by standard joints.

OXWELD RAILROAD SERVICE

FACTS ABOUT "OXWELD" APPARATUS AND SUPPLIES

OXWELD equipment has been used by a majority of the larger railroads and by scores of smaller lines for about forty years. One of the principal reasons for this wide acceptance has been OXWELD'S primary consideration for the special needs of railroads in both design specifications and performance of equipment and supplies.

Suggestions based on practical railroad shop and maintenance-of-way experience are co-ordinated with laboratory results of Union Carbide and Carbon Research Laboratories, Inc. and with developments of other Divisions of Union Carbide and Carbon Corporation. This combination of effort produces high-quality apparatus, supplies, and processes to help build, repair, and reclaim railroad fixed property and equipment most efficiently.

Write or call OXWELD *or consult an* OXWELD *representative for further information about any of these products and processes.*

OXWELD RAILROAD SERVICE COMPANY

A Division of Union Carbide and Carbon Corporation

UCC

Carbide and Carbon Building Chicago and New York

In Canada:

Canadian Railroad Service Company, Limited, Toronto

"Oxweld," "Heliarc," and "Unionmelt" are trade-marks; "Ribbonrail" is a service mark of Union Carbide and Carbon Corporation.

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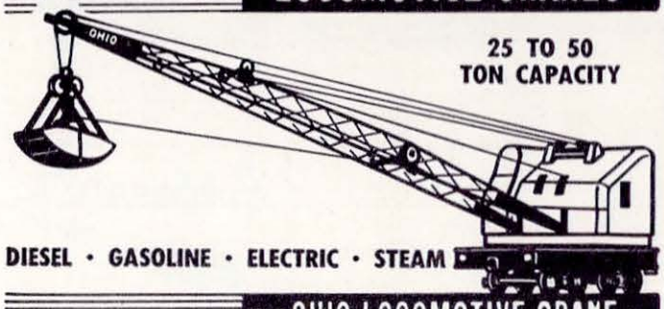

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Write giving full particulars concerning personal history and work experience. Please include telephone number.

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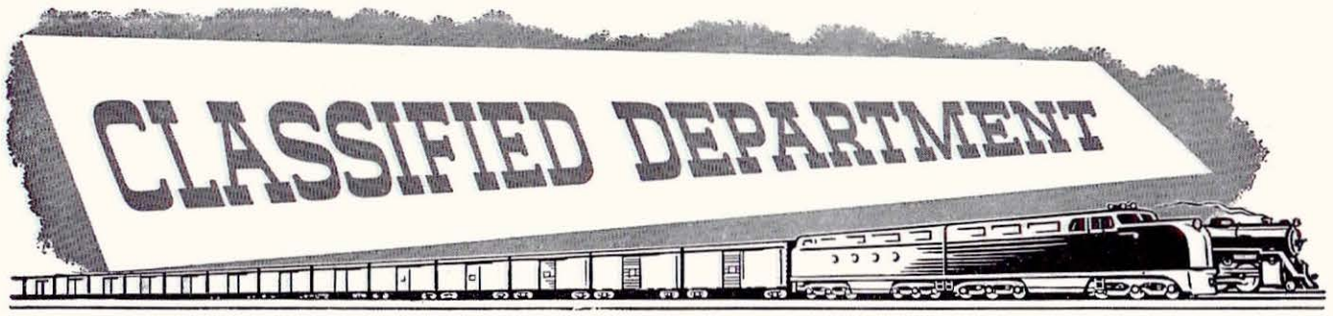

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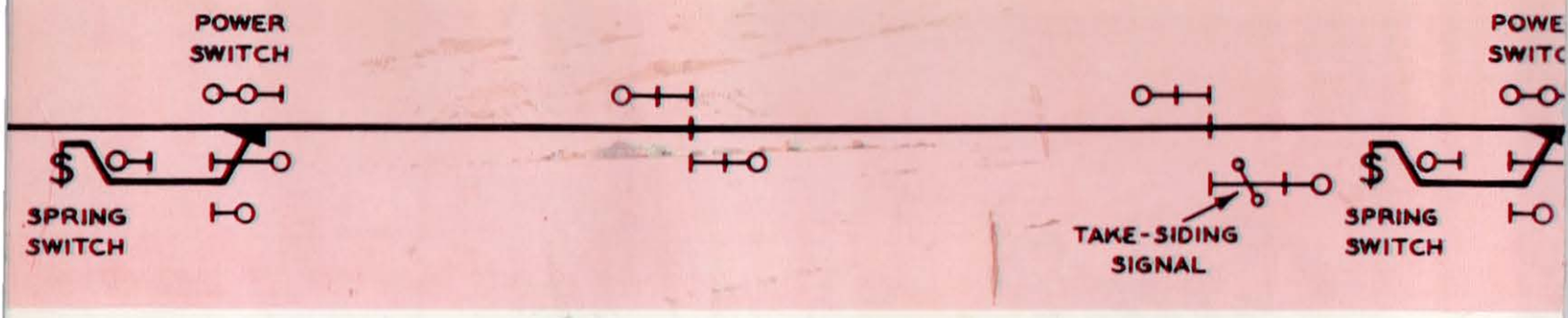

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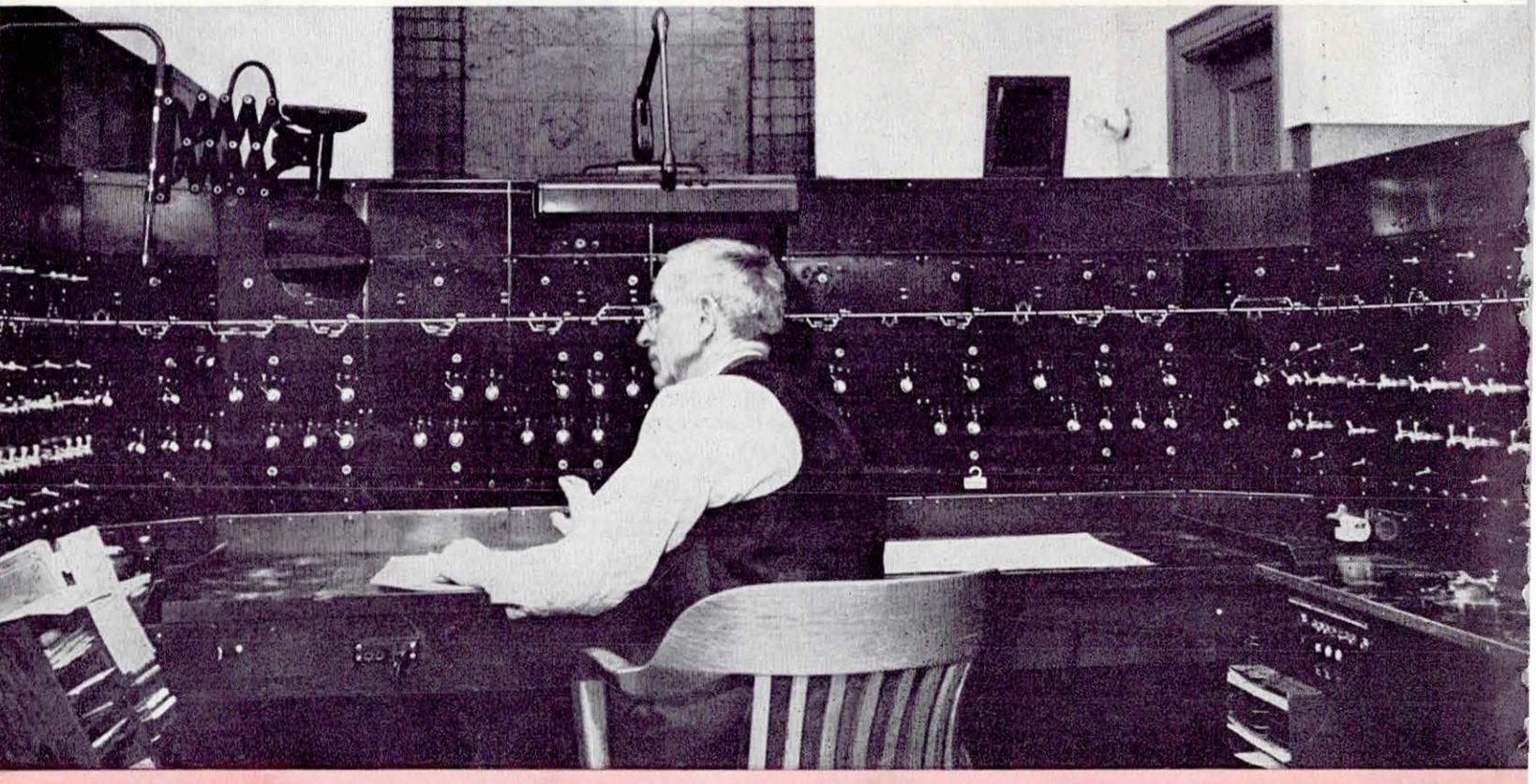
Your G-R-S district office will be glad to show you how G-R-S cTc can be tailored to fit your operating requirements. Ask for studies and estimates.



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